ODYSSE 120 /150/170 III

12.1”/15.0” or 151”/17.0” TFT
Intel® Celeron/Pentium® III
Plastic-housing Panel PC with
Versatile Bezel design

User’s Manual (Version 2305)

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Unpacking

After unpacking the **ODYSSE 120/150/170 III** carton, check and see if the following items are included and in good condition.

- **ODYSSE III main system** x 1
- Accessories
  - Power cord x 1
  - External FDD cable (optional) x 1
  - External 5V/12V DC power cable (optional) x 1
  - External IDE cable (optional) x 1
  - Utilities & drivers & user manual CD diskette x 1
    (for touchscreen drivers, please download the updated drivers from the following website
    http://www.3m.com or
    http://www.elotouch.com or
    http://www.eturbotouch.com
  - Panel mounting kit x 1 set
  - Screw packet

Make sure that all of the items listed above are present. If any of the above items is missing, contact your dealer immediately.

Warranty

All products manufactured by the Manufacturer. are warranted against defective materials and workmanship for one year starting from the date of delivery to the original purchaser. However, warranty or service will not be extended if 1). the product is repaired, modified or altered unless such repair, modification or alteration is authorized by the Manufacturer; or 2). the product serial number or warranty label is defaced or missing; or 3). the product is not properly used.

Important Safety Precautions

Before getting started, read these instructions and save them for later reference.

1. Turn off the computer before cleaning. Clean with a damp or dry cloth only. Do not spray any liquid cleaner on screen directly.
2. The power outlet socket used to plug in the computer power cord must be located near the system and easily accessible. Do not use outlets on the same circuit of the systems that regularly switched on and off.
3. Make sure the voltage of the power source is correct before connecting the computer to the power outlet.
4. If the computer is sharing an extension cord with other devices, make sure the total ampere rating of the devices plugged into the extension cord does not exceed the cord's ampere rating.
5. Do not expose the power cord, extension cord and power outlet to moisture.
6. Install the computer on a reliable surface to prevent damage caused by dropping.
7. This computer is not equipped with an operating system. An operating system must be loaded first before installing any software into the computer.
8. Disconnect the power cord from the computer before any installation. Make sure both the computer and the external devices are turned off. The sudden surge of power may ruin any sensitive components. Also make sure the computer is properly grounded.
9. During installation of any internal components, be sure to ground yourself to keep from any static charge. Most electronic components are sensitive to the static electric charge. Use a grounding wrist strap and place all electronic components in any static-shielded devices.

10. The openings on the computer enclosure are for the cabin ventilation to prevent the computer from overheating. DO NOT COVER THE OPENINGS.
11. The brightness of the flat panel display will decrease with use. However, hours of use will vary depending on the application environment.
12. If the computer is equipped with a touch panel, avoid using sharp objects to operate the touch panel. Scratches on the touch panel may cause mal-calibration or non-function to the panel.
13. The LCD panel display is not subject to shock or vibration. When assembling the computer, make sure it is securely installed.

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1. INTRODUCTION

This chapter provides background information and detail specification on the ODYSSE 120/150/170 III. Sections in this chapter include:

- General Information
- What covers in this Manual
- Specification
- Dimension

1.1. General Information

The information revolution which started from the mid '90 inaugurated a new competitive era where consumer-computing technology was exploited to business operation quicker than ever before. Many enterprises from our life related industries such as **POS**, **POI**, **KIOSK**, **Banking**, **Medical** to the high-tech **Telecom**, **Aerospace**, **Semiconductor** … etc. all are eager or forced to automate their industries with PCs in order to thrive in this new age. For their industrial automation, there is one thing in common, i.e. space is always a premium and system stability is always a must in their environmental applications.

The **ODYSSE 120/150/170** is a 12.1"/15.0" or 15.1"/17.0" TFT Intel Celeron/Pentium III/Pentium IV multimedia industrial panel PC system. With a 150W or 200W ATX power supply as its engine, the ODYSSE is a genuine P3/P4 panel PC designed for high performance multimedia application.

In terms of panel size, the ODYSSE has 12.1", 15.0" or 15.1" and 17.0" systems. In terms of system engine, the ODYSSE also have two versions, one **ODYSSE III**, Celeron/Pentium III system and the other **ODYSSE IV**, Pentium IV system. To upgrade the system, simply replace the motherboard.

Fully configurable and with its versatile front bezel design, the **ODYSSE 120/150/170** system is an ideal solution platform for any customized integration and industrial automation. The small bezel is mainly designed for KIOSK integration when the KIOSK cabinet is with a curve surface. The big bezel is for panel mounting or for KIOSK integration when the KIOSK cabinet is of flat surface and allows the computer to be fixed to the KIOSK cabinet directly from inside. The aluminum alloy bezel is mainly designed for panel mounting in any industrial floor.

1.2. What Covers in this Manual

This handbook contains most information you need to set up and use the ODYSSE III system. You do not need to read everything in this handbook to use the system.

For a quick start, see the following chapter summaries;

Chapter 1 (the current chapter) provides background information and detail specification on the ODYSSE 120/150/170 III.

Chapter 2 identifies the ODYSSE III system exterior components and provides instructions to help you to use the system as soon as possible.

Chapter 3 details the panel PC's various mounting options by graphical illustrations.

Chapter 4 provides the procedures to connect external devices to the I/O interface

Chapter 5 helps you to recognize the ODYSSE system internal components. It also provides the installation procedures including LCD, touchscreen, power supply module, CPU, system memory, FDD, HDD and CD-ROM drive.

Chapter 6 provides detail information of the jumper settings and connector signals of the system control board.

Chapter 7 explains the AWARD BIOS setup.

Chapter 8 introduces the Ethernet, XGA and audio drivers.

Chapter 9 details the procedures to install the touchscreen software drivers under DOS and Windows operation

Appendix A details the 12.1”/15.0” or 15.1”/17.0” LCD specifications.

Appendix B introduces the DiskOnChip® installation.

Appendix C introduces the Wake-On-LAN feature.

Appendix D explains the first MB memory map.

Appendix E provides the specifications for the built-in power supply.

1.3. Specifications

ODYSSE: 12.1"/15.0" or 15.1"/17.0" TFT Intel® Celeron/Pentium® III Industrial Panel PC with ***Versatile Bezel*** design

SYSTEM

Flat Panel

- **ODYSSE 120**: 12.1" color TFT, 800*600
  - Viewing angle 100
  - Luminance (cd/m^2) 150 or above
  - Simultaneous mode yes
- **ODYSSE 150**: 15.0"/15.1" color TFT, 1024*768
  - Viewing angle 120
  - Luminance (cd/m^2) 250/200 or above
  - Simultaneous mode yes
- **ODYSSE 170**: 17.0" color TFT, 1024*768
  - Viewing angle 120
  - Luminance (cd/m^2) 230 or above
  - Simultaneous mode yes

CPU (Socket 370)

- Intel Pentium III FCPGA 1GHz/133MHz
- Intel Pentium III FCPGA 650-933/133MHz
- Intel Pentium III FCPGA 500E-850E/100MHz
- Intel Celeron FCPGA 800MHz-1.10GHz/100MHz
- Intel Celeron FCPGA 533AMHz-766MHz/66MHz
- Intel Celeron PPGA 300A-533MHz/66MHz

System Chipset

- SiS 630ST

System BIOS

- Award PnP Flash BIOS

System Memory

- 1*168pin DIMM socket supporting SDRAM up to 512MB

L2 Cache

- CPU built-in

Standard I/O

- Serial ports*4: COM 1, 2 & 4 with +5V/12 power output on pin #9, COM 3 internal type reserved for touchscreen, COM2 RS-232/485 jumper selectable
- Parallel Port*1: supports SPP/EPP/ECP
- External FDD Interface*1
- +5V/+12V DC-out*1
- PS/2 Keyboard Interface*1
- PS/2 Mouse Interface*1
- DIO: Input*2, output*2
- USB Interface*2
- VGA Interface*1
- Brightness VR*1
- Speaker-out, MIC-in, Line in

Ethernet

- 100/10 Base-T Ethernet with RJ-45 phone jack
- Supports WAKE-ON-LAN

Watchdog Timer

Display

- Integrated 2D/3D graphics engine, 4X AGP
- Share system memory architecture able to utilize the display memory size up to 64MB
- Supporting LCD/VGA dual display mode (under Windows 98 and Windows ME and Windows XP)

Audio Function

- Full duplex and independent sample rate converter for audio recording & playback
- Supports Microsoft DirectSound
- 3D positional audio effects
- Hi-performance, mixed-signal, stereo
- MIC-In, Speaker-Out, Line-In
- Pin header for CD-audio in

Hardware Monitor

- Monitoring processor & system
- Monitoring 5VSB, VBAT, 1.5V, 3.3V, +5V, +12V, -12V, and processor voltages
- Monitoring processor, chassis fan speeds
- Controlling processor and chassis fan speed and failure alarm
- Automatic fan on/off control
- Read back capability that displays temperature, voltage and fan speed
- Supporting Intel processor thermal diode output (real processor temperature)

Expansion Slot

- PCI*2 or PCI*1 + ISA*1
- Expansion card size (L*W)
  - PCI card: max. 190*120 mm
  - ISA card max. 190*120 mm if no internal FDD is installed; 170*120 mm if internal FDD is installed

PERIPHERAL & STORATE DEVICES

Touchscreen (optional, sharing COM3)

- 12.1”/15.1”/17.0” analog resistive type with RS-232 controller
- 12.1”/15.1” capacitive type with RS-232 controller
- 12.1”/15.1” surface acoustic wave type (SAW)

Power Supply

- ATX 150W, input range: 100~240V/5A @60Hz, 200~240V/2.5A @50Hz
- DC 150W, 20~28VDC, 40~56VDC or DC 200W, 36~72VDC (optional)

CD-ROM or CD-RW or DVD-ROM

- Slim type*1 (optional) or
- External type via external IDE

Floppy Disk Drive

- Slim type*1 (optional) or
- Via external FDD or
- External type via USB

Hard Disk Drive

- 3.5" HDD*1 (optional)

MECHANICAL & ENVIRONMENTAL

Construction

- Heavy-duty steel

Dimension (chassis only, unit: mm)

- ODYSSE 120: 354*283*115 (L*W*D)
- ODYSSE 150: 395*320*127 (L*W*D)
- ODYSSE 170: 426*350*130 (L*W*D)

Front Bezels

- ODYSSE 120S: 354*283 mm (small bezel)
- ODYSSE 150S: 395*320 mm (small bezel)
- ODYSSE 170S: 426*350 mm (small bezel)
- ODYSSE 120B: 405*330 mm (big bezel)
- ODYSSE 150B: 448*371 mm (big bezel)
- ODYSSE 170B: 478*401 mm (big bezel)
- ODYSSE 120A: 405*330 mm (aluminum bezel)
- ODYSSE 150A: 448*371 mm (aluminum bezel)
- ODYSSE 170A: 478*401 mm (aluminum bezel)

Mounting

- Panel mount with mounting kits
- Wall mount with swing arm: standard VESA mounting holes (75*75 mm)
- To KIOSK enclosure

- *Specifications are subject to change without notice.*

1.4. Dimensions

1.4.1. ODYSSE 120

The ODYSSE 120's chassis size is shown below.

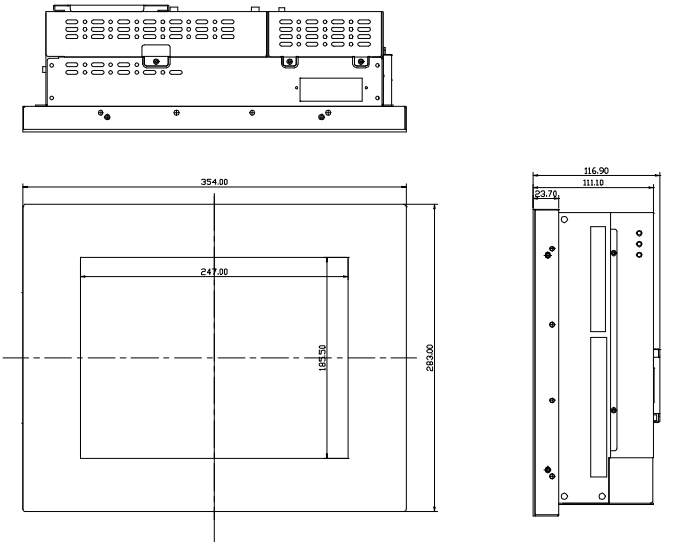


Figure 1-1: ODYSSE 120 DIMENSION

1.4.2. ODYSSE 150

The ODYSSE 150's chassis size is shown below.

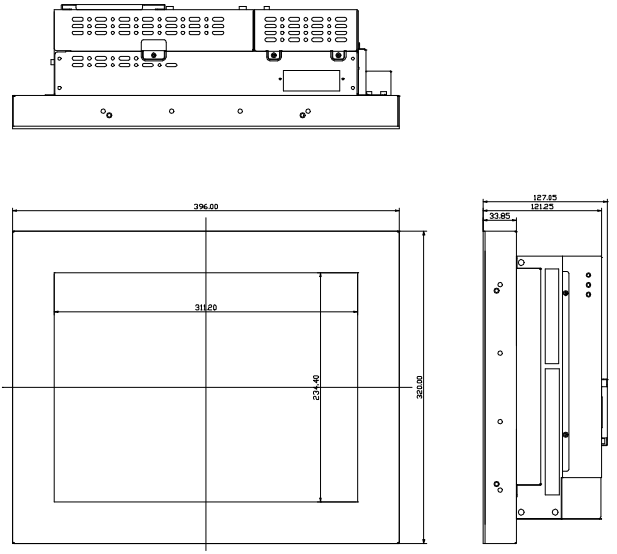


Figure 1-2: ODYSSE 150 DIMENSION

1.4.3. ODYSSE 170

The ODYSSE 170's chassis size is shown below.

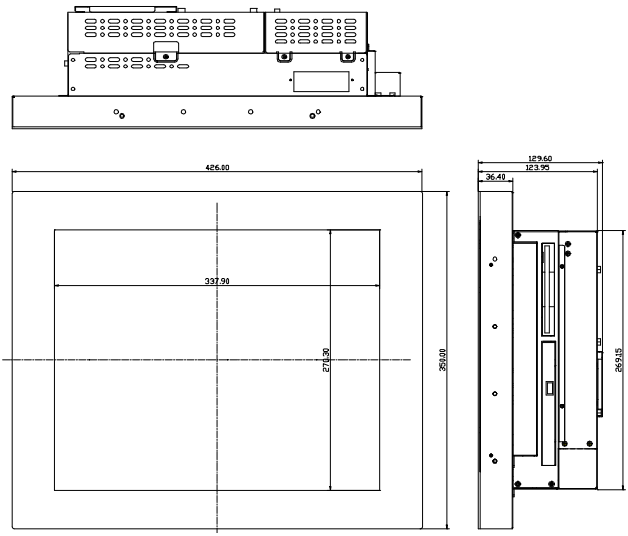


Figure 1-3: ODYSSE 170 DIMENSION

2. USING THE SYSTEM

- Identifying the ODYSSE system
- System setup for the first-time use

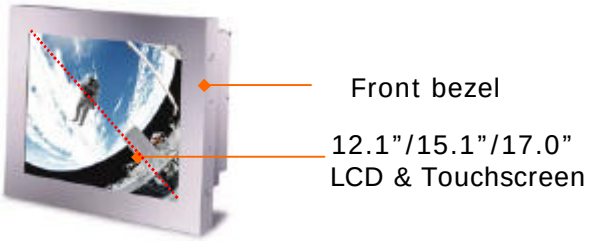
2.1. Identifying the System

Before getting started, take a moment to familiarize yourself with the system and the I/O arrangement of the ODYSSE 120/150/170.

2.1.1. Front View

The ODYSSE 's front view appears as below.

The illustrations of the ODYSSE 120/150/170 may differ slightly because the ODYSSE system series has two different LCD size: 12.1", 15.0" or 15.1" & 17.0".



ODYSSE with small

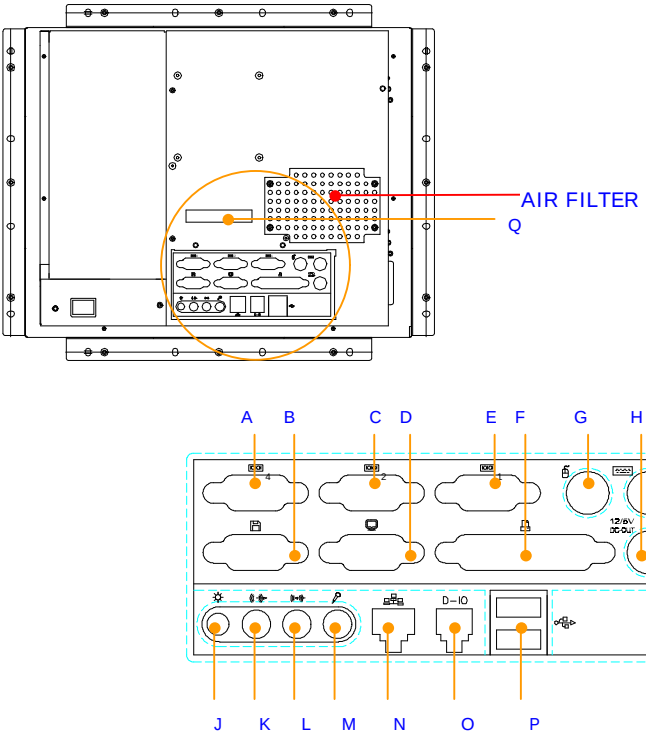
ODYSSE with big bezel

ODYSSE with aluminum bezel

FIGURE 2-1: ODYSSE FRONT BEZELS

2.1.2. I/O Outlets

When you turn around the ODYSSE system, you will find the power switch and all the I/O ports are located at the rear cover of the panel PC.



A. COM 4
B. EXTERNAL FDD
C. COM 2
D. VGA PORT
E. COM 1
F. PRINTER PORT
G. PS/2 MOUSE
H. +5/12V DC-OUT
I. PS/2 KEYBOARD
J. VR BRIGHTNESS
K. SPEAKER-OUT
L. LINE-IN
M. MIC-IN
N. ETHERNET (RJ-45)
O. 2-CHANNEL DIO
P. USB*2
Q. EXTERNAL IDE

2.2. System Setup for the First-time Use

To set up the ODYSSE 120/150/170 for the first-time use, you should have the following items ready. The items are either in the accessory box or available in any computer stores.

- 110V or 220V power cord
- PS/2 or AT keyboard or wireless keyboard
- PS/2 or serial mouse

2.2.1. Installation Procedures

The ODYSSE system can be powered either by an AC electrical outlet (100~240V/5A @60Hz, 200~240V/2.5A @50Hz) or by DC power source (20~28VDC or 40~56VDC or 36~72VDC). If the system is to be powered up by AC power, be sure to use the right power cord (110V or 220V) for connection.

1. Connect the female end of the power cord to the AC inlet located at the rear bottom side of the panel PC.
2. Connect the 3-pin male end of the power cord to an electrical outlet.
3. Connect a PS/2 keyboard or an AT keyboard to keyboard port. If you are using an AT keyboard, you need an adapter (AT to PS/2 KB) for this connection.
4. Connect the PS/2 mouse to the PS/2 mouse port. If you are using a serial mouse, it can be connected to the COM port.
5. Turn on the main switch on the power supply if there is one.
6. Power on the panel PC by switching the power switch located at the rear bottom side.

2.2.2. Running the BIOS Setup

If you are a commercial user, the ODYSSE 120/150/170 III should have been properly set up and configured by your dealer. You may still find it necessary to change the system configuration information. In this case, you need to run the system's BIOS setup program.

Under the following conditions, the CMOS settings are to be changed.

1. The system is starting for the first time.
2. The hardware devices attached to the ODYSSE III system have been changed.
3. The CMOS memory has lost power and the configuration information has been erased.

The BIOS setup program is stored in ROM, which can be accessed by pressing <DEL> key on the keyboard immediately when the system is powered on.

In order to retain the specified setup information when the system power is turned off, the system setup information is stored in a battery-backed CMOS RAM. The battery is to ensure the settings will not be erased when the computer is turned off or reset. When the computer is powered on again, the system will read the settings stored in the CMOS RAM and compare them to the equipment check conducted during the power on self-test (POST). If any error or mismatch occurs, an error message will be shown on the screen and the computer will be prompted to run the setup program.

To change the BIOS setup, please refer to Chapter 7 for more information.

2.2.3. Operating System and Driver Installation

The ODYSSE III system is not equipped with an operating system when delivered from the original manufacturer. If you are a commercial user, the system is likely to have been pre-installed proper operating system and software drivers by your dealer or system integrator.

If the system is not pre-installed with any system OS and drivers or you intend to install your preferred ones, there are several ways to load OS and software into the system.

1. Via the external FDD or internal FDD
2. Via the CD-ROM
3. Via Ethernet: You can boot up the system via Ethernet bootrom (optional) and download system OS or software from the network.

Recent releases of operating systems always include setup programs that load automatically and guide you through the installation. You can also refer to your OS user manual for instructions on formatting or partitioning the hard disk drive before any software installation.

The ODYSSE III system provides the following utility drivers stored in the CD-ROM diskette or utilities diskettes;

- ✧ Ethernet utilities
- ✧ VGA utilities
- ✧ Audio drivers
- ✧ Touchscreen drivers

3. MOUNTING OPTIONS

To ODYSSE system is designed for universal mounting to fit into different system enclosures for various environmental applications. This chapter highlights the steps of different mounting alternatives of the ODYSSE system. Sections include

- Different Front Bezels
- Metal Brackets
- Panel Mount
- Wall Mount

3.1. Different Front Bezels

The standard ODYSSE systems provide 4 kinds of front bezels for different environmental applications.

3.1.1. ODYSSE system with Small Bezel

The ODYSSE 120/150/170 **S** is a ODYSSE system with small bezel. The front bezel size is identical to the computer's chassis size.

FIGURE 3-1: ODYSSE SMALL BEZEL

Front bezel size (Small bezel)

ODYSSE 120S: 354*283 mm

ODYSSE 150S: 395*320 mm

ODYSSE 170S: 426*350 mm

This type of bezel is mainly designed for KIOSK integration when the KIOSK enclosure is not with flat surface and does not allow a big bezel computer. When integrating the ODYSSE S system into the KIOSK enclosure, the integrator may need to design special metal brackets per the enclosure's specific mechanism in order to fix the ODYSSE system to the enclosure.

3.1.2. ODYSSE system with Big Bezel

The ODYSSE 120/150/170 **B** is a ODYSSE system with big bezel. The front bezel size is larger than the computer's chassis size.

FIGURE 3-2: ODYSSE BIG BEZEL

Front bezel size (Big Bezel)

ODYSSE 120B: 405*330 mm

ODYSSE 150B: 448*371 mm

ODYSSE 170B: 478*401 mm

The type of bezel is mainly designed for panel mounting or for KIOSK integration when the KIOSK enclosure is with flat surface and allows the computer to be fixed to the KIOSK enclosure directly. When integrating the ODYSSE B system into the KIOSK enclosure, the integrator can either use the provided metal brackets or design special metal fixtures per the enclosure's specific mechanism in order to fix the ODYSSE system to the enclosure.

3.1.3. Aluminum Alloy Bezel

The ODYSSE 120/150/170 **A** is a ODYSSE system with an aluminum alloy bezel. The aluminum alloy bezel is mainly designed for panel mounting. It not only strengthens the system's framework but also beautifies the system outlook when the system is panel mounted.

Front bezel size (Aluminum bezel)

ODYSSE 120A: 405*330 mm

ODYSSE 150A: 448*371 mm

ODYSSE 170A: 478*401 mm

FIGURE 3-3: ODYSSE ALUMINUM ALLOY BEZEL

3.1.4. Workstation Bezel for 19" Rack Mount

The rack mount bezels are only available with 15" and 17.0" system. The ODYSSE system after replacing with 19" rack mount bezel is called ORION 150/170. The ORION 150/170 share the same kernel with the ODYSSE series industrial panel PCs. Simply by replacing the front bezel module and an IO board, the ODYSSE systems can be easily transformed to a series of industrial workstations for 19" rack mount. For detailed information, please refer to ORION 150/170 user manual.

FIGURE 3-3: ODYSSE 19" RACK MOUNT BEZEL

3.2. Mounting Brackets

The ODYSSE system provides a pair of L-shape mounting brackets for system panel mounting. On the chassis sides, there are at least 4 screw holes on each side used to fix the metal brackets and the chassis together.

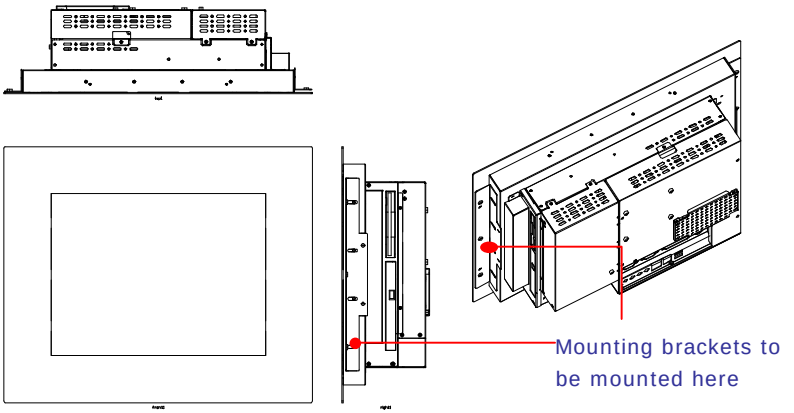


FIGURE 3-5: ODYSSE B MOUNTING WITH L-SHAPE MOUNTING BRACKETS

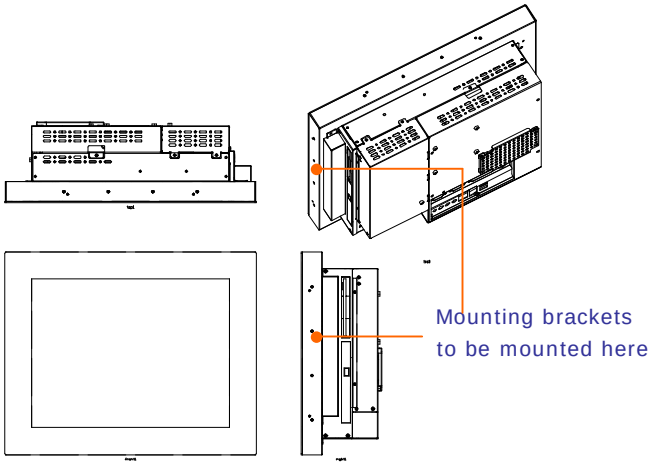


FIGURE 3-6: ODYSSE S MOUNTING WITH L-SHAPE MOUNTING BRACKETS

3.2.1. ODYSSE 120 Panel Mount

The following figures illustrate the distance between the screw holes on the bezel to be fixed with the L-shape mounting brackets.

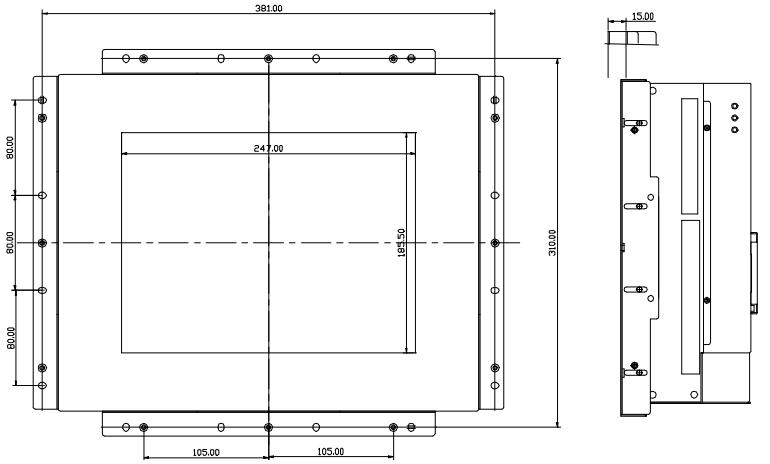


FIGURE 3-7: ODYSSE 120 with small bezel

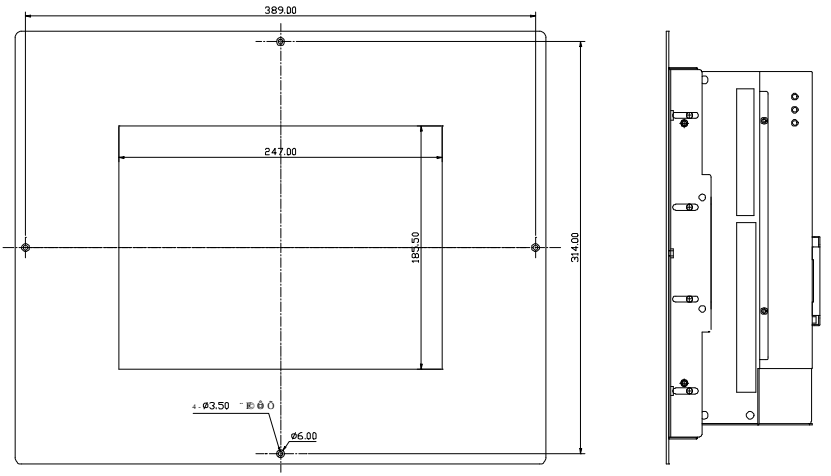


FIGURE 3-8: ODYSSE 120 with big bezel

3.2.2. ODYSSE 150 Panel Mount

The following figures illustrate the distance between the screw holes on the bezel to be fixed with the L-shape mounting brackets.

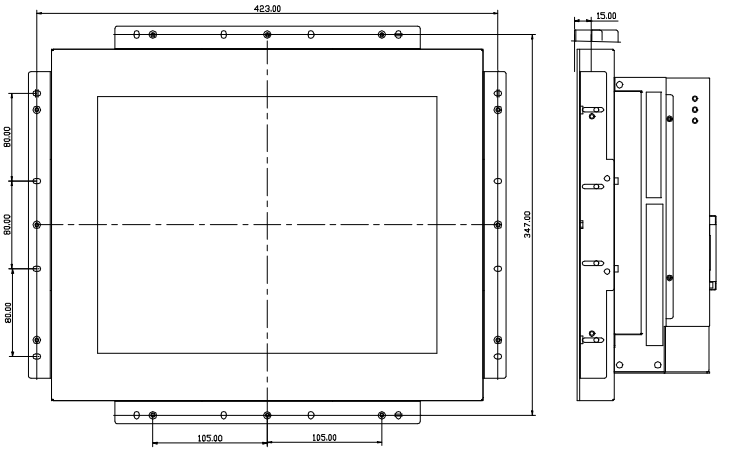


FIGURE 3-9: ODYSSE 150 with small bezel

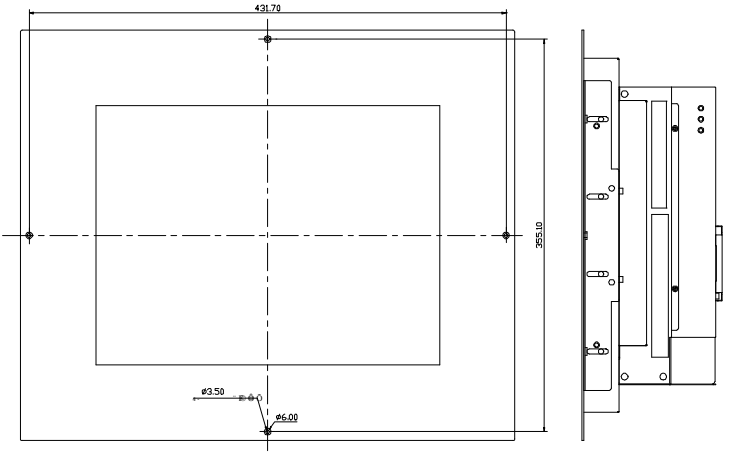


FIGURE 3-10: ODYSSE 150 with big bezel

3.2.3. ODYSSE 170 Panel Mount

The following figures illustrate the distance between the screw holes on the bezel to be fixed with the L-shape mounting brackets.

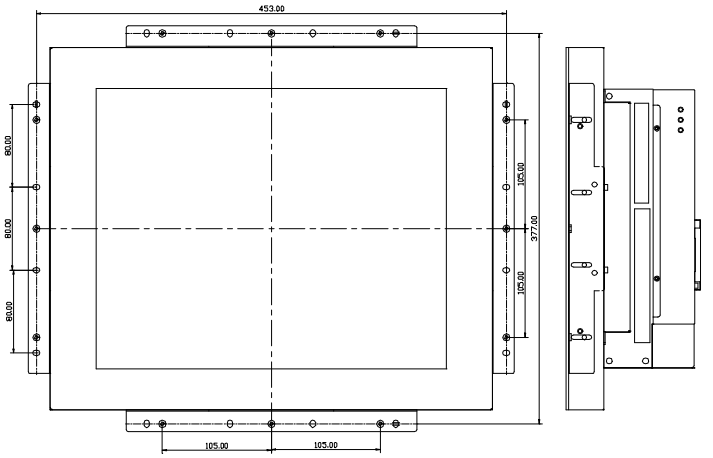


FIGURE 3-11: ODYSSE 170 with small bezel

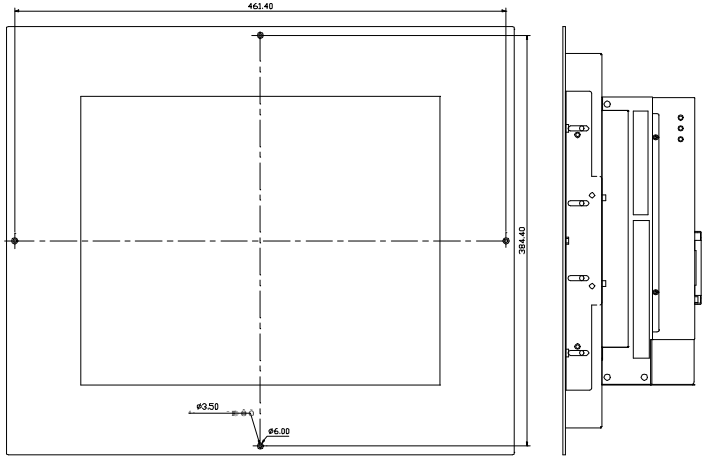


FIGURE 3-12: ODYSSE 170 with big bezel

3.3. Wall Mounting and Mobile Applications

The ODYSSE system provides 1 set of VESA mounting holes, 75*75mm on the rear side of the chassis. System integrators can design their special wall mount brackets per the VESA holes or obtain market-available swing arms for wall mounting, table mounting or mobile applications.

4. I/O CONNECTION

This chapter describes the ODYSSE system I/O ports and how to use the I/O interface to connect to external devices.

The I/O interfaces located at the rear side of the chassis are used to connect external peripheral devices, such as a mouse, a keyboard, a monitor, serial devices or parallel printer...etc. Before any connection, make sure that the computer and the peripheral devices are turned off.

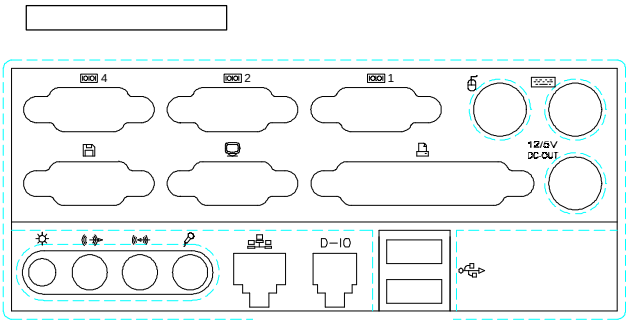


FIGURE 4-1

4.1. Parallel Port

The ODYSSE 120/150/170 can support the latest EPP and ECP parallel port protocols. It can be used to connect to a wide array of printers, ZIP drive, parallel scanner and any other parallel devices. The printer interface on the ODYSSE 120/150/170 III is a 25-pin female D-SUB connector. To connect any parallel device, follow the steps below:

1. Turn off the system and the parallel devices.
2. Plug in the male connector of the parallel device to the 25-pin female D-SUB connector and fasten the retaining screws.
3. Turn on the system and the attached parallel devices.
4. Refer to the parallel device's manual for instruction to configure the operation environment to recognize the new attached devices.
5. You may need to run the CMOS setup to change the hardware device setup.

4.2. COM Ports x 4

The ODYSSE 120/150/170 features with four onboard COM ports. COM 1, 2 & 4 are D-SUB serial ports located at the rear side of the chassis, ready to connect to a wide range of serial devices. COM 3 is internal serial port reserved for touchscreen for internal connection. COM1, COM3 and COM4 are RS-232 and COM2 is RS-232/422/485, selected via jumper setting. For COM 2 RS-232/422/485 selection, please refer to SEC. 6.1.2.

COM 1, 2 & 4 are equipped with +5V/+12V power capabilities on pin 9, providing easy accommodation to a broad range of serial devices.

The COM port 5V/12 power is selected via jumper setting on the IO board. The IO is the signal board attached to the rear panel with 2 SCSI cables linking to the system motherboard to connect the onboard signal out to the external I/O ports.

Please refer to SEC. 6.2.2 for 5V/12 power selection.

If a touchscreen module is installed, for factory default setting, its controller will occupy COM3.

COM1, 2 & COM4 are all D-SUB 9-pin connectors. To connect to any serial device; follow the procedures below;

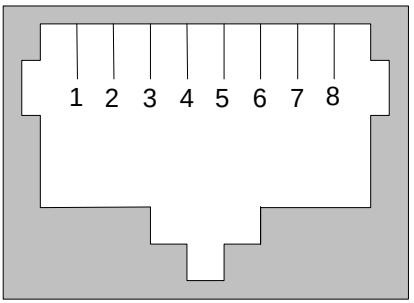
1. Turn off the ODYSSE system and the serial devices.
2. Attach the interface cable of the serial device to the 9-pin D-SUB serial connector. Be sure to fasten the retaining screws.
3. Turn on the computer and the attached serial devices.
4. Refer to the serial device's manual for instruction to configure the operation environment to recognize the new attached devices.
5. If the serial device needs specified IRQ or address, you may need to run the CMOS setup to change the hardware device setup.

If the COM2 is to be set to RS-422/485 for long distance transmission, the related onboard jumpers have to be set correctly first. Refer to section 6.1.4.3 for the RS-232/422/485 jumper settings.

4.3. 100/10 Base-T Ethernet (RJ-45)

The ODYSSE 120/150/170 provides a 100/10 Base-T NE2000 compatible Ethernet (RJ-45) interface. For network connection, follow the instructions below.

1. Turn of the ODYSSE system and the Ethernet hubs.
2. Plug in one end of cable of a 100/10 Base-T hub to the system's RJ-45 phone jack. The pin assignment of the RJ-45 is listed as follow;



RJ-45

RJ-45 Connector Pin Assignment

Pin	Description
1	Tx+ (data transmission positive)
2	Tx- (data transmission negative)
3	Rx+ (data reception positive)
6	Rx- (data reception negative)
others	No use

4.4. VGA Interface

The ODYSSE 120/150/170 has a 15-pin analog RGB connector located at the rear side of the chassis. It can support its own LCD display and an expansion CRT or analog monitor at the same time. The connection to an analog monitor is an easy plug-in of the VGA D-SUB 15-pin connector to the RGB interface.

4.5. 2nd Display Graphic Support Mode

The ODYSSE can support *SINGLE DISPLAY MODE* and *DUAL DISPLAY MODE*. For dual display mode, it can support *MIRROR MODE* (same screen) or *MULTIPLE-MONITOR MODE* (different screens). *PLEASE NOTE THAT THE MULTIPLE-MONITOR MODE ONLY WORKS WHEN THE OPERATING SYSTEM IS WINDOWS 98 OR WINDOWS ME OR WINDOWS XP.*

The ODYSSE itself is onboard with an AGP LCD/VGA controller. When dual display mode is activated, it can support a LCD panel (digital TTL) and a CRT or an analog monitor at either mirror mode or multiple-monitor mode.

The following sections describe all the graphic support modes based on system memory clock frequency (66MHz, 100MHx and 133MHz). All these tables apply only to video memory size is equal or larger than 8MB.

4.5.1. When System Memory Clock = 66MHz

The following tables contain all graphic support modes under the following condition and are classified under three output modes (single mode, mirror mode and multiple-monitor mode).

System memory clock = 66MHz

Memory bus width = 64 bit

Video memory size = 8MB or above

4.5.1.1. Single Display Mode

Resolution	Bpp	CRT1	LCD
640*480	8	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	16	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	32	60, 72, 75, 85, 100, 120, 160	60, 70, 75
800*600	8	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	16	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	32	56, 60, 72, 75, 85, 100, 120	60, 70, 75
1024*768	8	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	16	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	32	43, 60, 70, 75	
1280*1024	8	43, 60, 75, 85	60
	16	43, 60, 75, 85	
	32	43	
1600*1200	8	60, 65, 70, 75, 85	
	16	60	
	32		
1920*1440	8	60	
	16		
	32		

4.5.1.2. Mirror Display Output Mode

When LCD is selected as secondary display at mirror mode:

Resolution	Bpp	CRT1 at mirror mode	LCD at mirror mode
640*480	8	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	16	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	32	60, 72, 75, 85, 100	60
800*600	8	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	16	56, 60, 72, 75, 85, 100, 120	60, 70, 75
	32		
1024*768	8	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	16		
	32		

4.5.1.3. Multiple Display Output Mode

When LCD is selected as secondary display at multiple-monitor mode:

Resolution	Bpp	CRT1 at MM mode	LCD at MM mode
640*480	8	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	16	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	32	60, 72, 75, 85, 100	60
800*600	8	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	16	56, 60, 72, 75, 85, 100, 120	60, 70, 75
	32	56, 60	
1024*768	8	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	16	43, 60, 70, 75	
	32	43	
1280*1024	8	43, 60, 75, 85	
	16	43	
	32		
1600*1200	8	60, 65	
	16		
	32		

4.5.2. When System Memory Clock = 100MHz

The following tables contain all graphic support modes under the following condition and are classified under three output modes (single mode, mirror mode and multiple-monitor mode).

System memory clock = 100MHz

Memory bus width = 64 bit

Video memory size = 8MB or above

4.5.2.1. Single Display Mode

Resolution	Bpp	CRT1	LCD
640*480	8	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	16	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	32	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
800*600	8	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	16	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	32	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
1024*768	8	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	16	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	32	43, 60, 70, 75, 85, 100	60, 70, 75
1280*1024	8	43, 60, 75, 85	60
	16	43, 60, 75, 85	60
	32	43, 60	
1600*1200	8	60, 65, 70, 75, 85	
	16	60, 65, 70, 75, 85	
	32		
1920*1440	8	60	
	16	60	
	32		

4.5.2.2. Mirror Display Output Mode

When LCD is selected as secondary display at mirror mode:

Resolution	Bpp	CRT1 at mirror mode	LCD at mirror mode
640*480	8	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	16	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	32	60, 72, 75, 85, 100, 120, 160	60, 70, 75
800*600	8	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	16	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	32	56, 60, 72, 75, 85	60
1024*768	8	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	16	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	32		

4.5.2.3. Multiple Display Output Mode

When LCD is selected as secondary display at multiple-monitor mode:

Resolution	Bpp	CRT1 at MM mode	LCD at MM mode
640*480	8	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	16	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	32	60, 72, 75, 85, 100, 120, 160	60,70, 75
800*600	8	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	16	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	32	56, 60, 72, 75, 85	60
1024*768	8	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	16	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	32	43, 60	
1280*1024	8	43, 60, 75, 85	
	16	43, 60, 75	
	32		
1600*1200	8	60, 65, 70, 75, 85	
	16		
	32		
1920*1440	8	60	
	16		
	32		

4.5.3. When System Memory Clock = 133MHz

The following tables contain all graphic support modes under the following condition and are classified under three output modes (single mode, mirror mode and multiple-monitor mode).

System memory clock = 133MHz

Memory bus width = 64 bit

Video memory size = 8MB or above

4.5.3.1. Single Display Mode

Resolution	Bpp	CRT1	LCD
640*480	8	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	16	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	32	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
800*600	8	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	16	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	32	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
1024*768	8	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	16	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	32	43, 60, 70, 75, 85, 100, 120	60, 70, 75
1280*1024	8	43, 60, 75, 85	60
	16	43, 60, 75, 85	60
	32	43, 60, 75, 85	60
1600*1200	8	60, 65, 70, 75, 85	
	16	60, 65, 70, 75, 85	
	32	60	
1920*1440	8	60	
	16	60	
	32		

4.5.3.2. Mirror Display Output Mode

When LCD is selected as secondary display at mirror mode:

Resolution	Bpp	CRT1 at mirror mode	LCD at mirror mode
640*480	8	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	16	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	32	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
800*600	8	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	16	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	32	56, 60, 72, 75, 85, 100, 120	60, 70, 75
1024*768	8	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	16	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	32		

4.5.3.3. Multiple Display Output Mode

When LCD is selected as secondary display at multiple-monitor mode:

Resolution	Bpp	CRT1 at MM mode	LCD at MM mode
640*480	8	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	16	60, 72, 75, 85, 100, 120, 160, 200	60, 70, 75
	32	60, 72, 75, 85, 100, 120, 160, 200	60,70, 75
800*600	8	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	16	56, 60, 72, 75, 85, 100, 120, 160	60, 70, 75
	32	56, 60, 72, 75, 85, 100, 120	60, 70, 75
1024*768	8	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	16	43, 60, 70, 75, 85, 100, 120	60, 70, 75
	32	43, 60, 70, 75	
1280*1024	8	43, 60, 75, 85	
	16	43, 60, 75, 85	
	32	43	
1600*1200	8	60, 65, 70, 75, 85	
	16	60, 65	
	32		
1920*1440	8	60	
	16		
	32		

4.6. PS/2 Keyboard Interface

The ODYSSE provides a standard PS/2 keyboard connector located at the rear panel. If the user would like to use AT keyboard, then an adapter to connect the PS/2 KB to AT KB is needed.

4.7. PS/2 Mouse Interface

The ODYSSE system has one PS/2 mouse connector located at the rear side. A simple plug-in will make the connection.

4.8. External IDE

In addition to the internal CD-ROM and HDD, the ODYSSE also provides an internal IDE interface able to connect to an external IDE device.

The ODYSSE external IDE interface is a 40-pin header connector located at the rear side of the chassis. An external IDE cable is provided to connect a standard IDE device to the system. The external IDE is connected to onboard IDE 2 with the internal CD-ROM.

The ODYSSE system is equipped with a +5V/12V DC-out connector to provide 5V power to drive the external IDE device. Use the provided power cable to connect the IDE device to the 5V DC-out connector.

4.9. External FDD (DB-15)

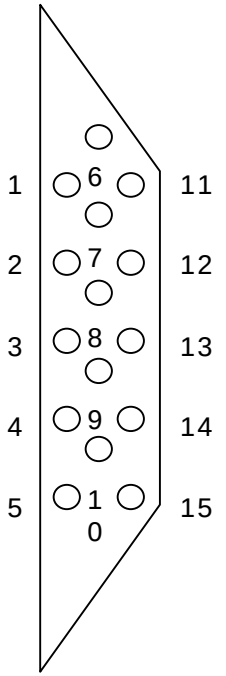
The ODYSSE 120/150/170 provides two ways to connect to a floppy disk drive to fit into specific environmental applications:

1. Internal FDD
2. External FDD

If the FDD is frequently used, it is suggested to use an internal floppy disk drive. If the drive is used only for system installation or maintenance, then, an external device can fulfill this need and is more economical. Please note that if an internal floppy disk drive already exists, no external floppy drive can be used.

The ODYSSE external FDD interface is a 15-pin D-sub connector located at the rear side of the chassis. An external FDD cable is provided to connect a standard 3.5" FDD to the system. Its pin position and pin assignment are listed as follows.

Pin #	Signal	Pin #	Signal
1	DELSEL	9	-WD
2	-INDEX	10	-STEP
3	-MTR1	11	-RD
4	-DVR1	12	-HDSEL
5	-DIR	13	-DSKCHG
6	-WP	14	+5V
7	-TRKO	15	+12V
8	-WG		



The ODYSSE system is equipped with a +5V/12V DC-out connector to provide 5V power to drive the external floppy disk drive. Use the provided FDD power cable to connect the floppy drive to the 5V DC-out connector when an external floppy drive is attached to the system.

4.10. +5V/12V DC-Out

The ODYSSE system provides a +5V/12V DC-out connector. It is used to provide necessary power source for some external devices. For example, if the ODYSSE III system is to be housed in a KIOSK cabinet which requests extra cooling fan for heat dispensing, then the fan power cable can be attached to 5V/12V DC-out to obtain power from the computer directly. If an external floppy disk drive is attached to the system, it will need +5V power source from the system. A power cable for the external floppy disk drive is already provided for this connection. For other devices, you might need to make your own power cable for the connection.

4.11. VR Brightness Control

The ODYSSE system provides a VR control to adjust the brightness of the LCD. The VR control is with a "+" shape cutout on it. You will need a "+" shape screwdriver to adjust it for display brightness control.

4.12. DIO (Digital Input & Output)

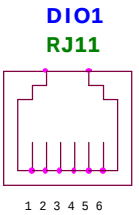
The ODYSSE III provides 2-channel digital input and output that can be used for the system's simple automation control needs. The digital I/O can be configured to control the opening of a cash drawer or to sense the warning signal of an uninterrupted power system (UPS) or to do the store security control.

The DIO port address and pin definition is listed below;

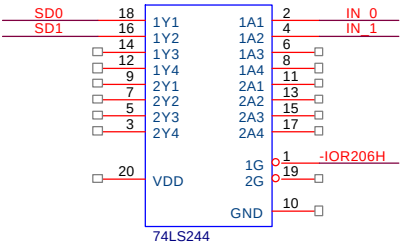
I/O Port address: 208H

Read: SD0, SD1

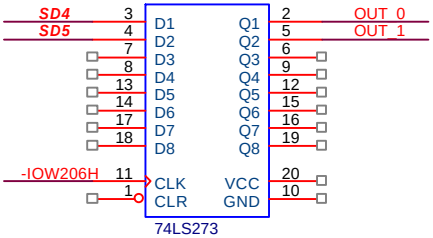
Write: SD4, SD5

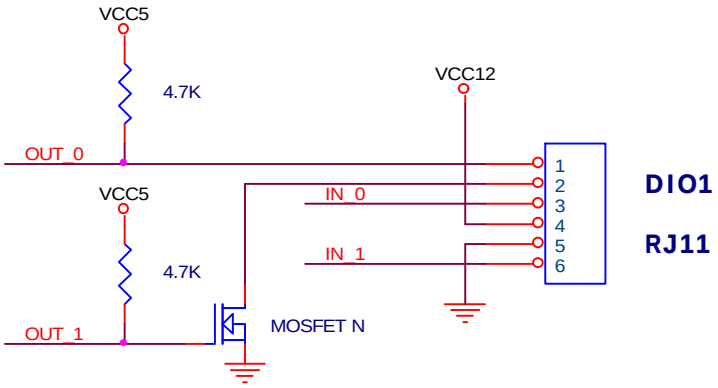


IO 208H(READ)



IO 208H(WRITE)





The Digital I/O is of TTL interface. It is controlled via software programming.

Digital I/O Programming

Input/output address: 208H

In_Data 0~3=SD0~SD1

Out_Data 0~3 SD4~SD7

EXAMPLE:

```
10   REM Digital I/O example program
20   X = INP (&H208)        REM INPUT Digital I/O port
                            for 4 bit
30   X = OUT (&H208)        REM OUTPUT Digital I/O port
      ⋮                     for 4 bit
60   END
100  Return
```

Port 208H Definition

4.13. Audio Interface (Line-in, MIC-in, SPK-out)

The audio interface contains three jacks, microphone-in, line-in and speaker-out.

The microphone-in jack is used to record sound or voice by connecting to an external microphone. The line-in jack is used to input audio from an external audio device such as a CD player, tape recorder or a radio. The speaker-out jack is to output the audio to external devices such as speakers or earphones. The audio device can be directly attached to the jacks. Please note that the audio driver has to be installed first before using any audio device.

4.14. USB Ports

The ODYSSE 120/150/170 III also provides two USB ports to connect to external USB devices. A simple plug-in of the USB device interface cable to the USB port will make the connection. Before using the USB devices, remember to install the device driver first.

4.15. AC/DC Inlet/Power Switch

For ODYSSE 120/150/170 III AC system, it can operate in the input range from 100 ~ 240 volts, 50 ~ 60 Hz. For DC system, the input range can be from 18V to 72V with different power supply.

5. HARDWARE INSTALLATION AND UPGRADE

This chapter overviews the installation of the ODYSSE III's internal components and devices. This chapter is for service engineers not for the end user. Sections include:

- The exploded diagram
- Motherboard assembly
- Touchscreen controller assembly
- LCD module assembly
- Front bezel assembly
- HDD module assembly
- CD-ROM/FDD assembly
- Power module assembly
- Expansion slots

The ODYSSE 120/150/170 III consists of a Celeron/ Pentium® III multimedia motherboard with an adequate CPU and relevant SDRAM on it. The system motherboard and other internal devices such as expansion card, HDD and power supply are already housed in the chassis. The system's performance depends on the installed CPU and the capacity of the system memory and hard disk drive. In some circumstances, you might intend to upgrade or maintain the system. By removing the rear cover and the metal covers, the internal components such as CPU, SDRAM, HDD, internal FDD, CD-ROM and power supply can be easily accessed for maintenance and upgrade.

The ODYSSE is composed of 9 major modules. The installation procedure is also listed as below.

1. Motherboard module
2. Touchscreen controller module
3. HDD module
4. LCD module
5. Front bezel module
6. CD-ROM/FDD module
7. Power supply module
8. Expansion slot module
9. Back panel module

To disassemble the system module for maintenance, the procedure is from step 9 to 1.

5.1. Recognizing the System Major Parts

In terms of LCD size, the ODYSSE has three models, one 12.1", another 15.1" and the other 17.0". The assembly of the three models is basically the same except the LCD assembly. The following diagram highlights the system major parts that make up the ODYSSE 120 main system.

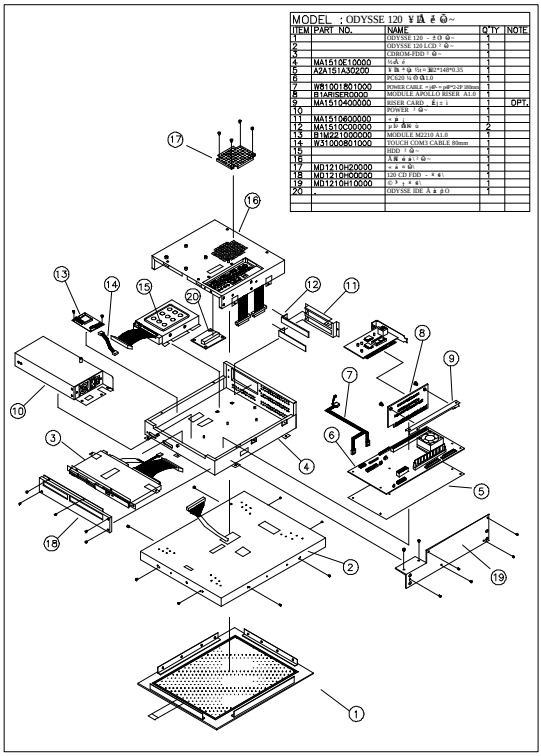
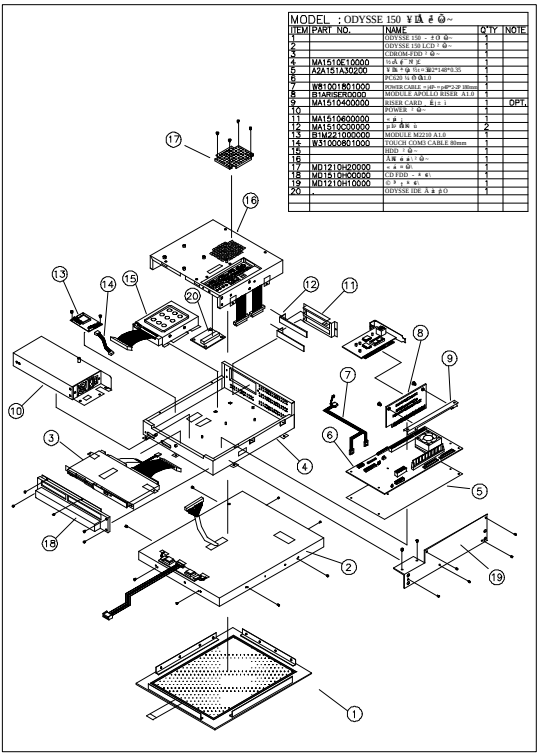


FIGURE 5-1: ODYSSE 120 EXPLODED DIAGRAM

The following diagram shows the system major parts that make up the ODYSSE 150 main system.



MODEL : ODYSSE 150

ITEM	PART NO.	NAME	Q'TY	NOTE
1		ODYSSE 150 -	1	
2		ODYSSE 150 LCD	1	
3		CDROM-FDD	1	
4	MA1510E150000		1	
5	AZA161A30200		1	
6		PC820	1	
7	W81001801000	POWER CABLE	1	
8	B1ARISER00000	MODULE APOLLO RISER A1.0	1	
9	MA1510400000	RISER CARD	1	OPT.
10		POWER	1	
11	MA1510600000		1	
12	MA1510C00000		2	
13	B1M2210000000	MODULE M2210 A1.0	1	
14	W31000801000	TOUCH COM3 CABLE 80mm	1	
15		HDD	1	
16			1	
17	MD1210H20000		1	
18	MD1510H00000	CD/FDD	1	
19	MD1210H10000		1	
20	-	ODYSSE IDE	1	

FIGURE 5-2: ODYSSE 150 EXPLODED DIAGRAM

5.2. Installing the CPU

The ODYSSE III can adapt Socket 370 Intel® Celeron® or Pentium III CPU. Upgrading the CPU can increase the system performance. When Pentium III 1GB 133MHz is used with the system, it is suggested to attach another system cooling fan at the right side of the system compartment to prevent the system from overheating.

The ODYSSE's motherboard provides one 370-pin ZIF socket (Socket 370). The CPU must come with a CPU fan with a heat sink on to avoid overheating.

To install a CPU or upgrade a new CPU, follow the instructions below.

1. If there is an existing CPU on the socket, remove the CPU cooling fan first. Then remove the CPU by pulling the lever out a little and raising it, then lifting out the existing CPU from the socket.
2. To insert the CPU into the socket, the notch on the corner of the CPU (the corner with golden dot) should point toward the end of the socket lever. If the insertion of the CPU to the socket is not easy, check whether the CPU pins correspond with the holes on the socket.
3. After insert the CPU into the socket, pull the lever down to make sure the CPU is in place.
4. The CPU cooling fan comes with a 3-pin power cable. Connect the power cable to the 3-pin power connector, FAN1 on the motherboard.
5. There are two white clips on the CPU socket. Make sure the cooling CPU fan clips click into place.

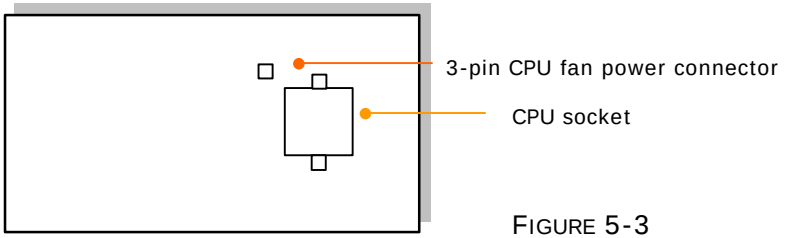


FIGURE 5-3

5.3. Installing the SDRAM Memory Module

The ODYSSE 120/150 III system control board provides 1 x 168-pin DIMM socket, able to support SDRAM memory from 32MB up to 512MB. To install the memory module, follow the instructions below.

1. Find the 168 pin DIMM socket on the motherboard
2. There are two white eject levers at each end of the DIMM socket. Push them outward until they separate from the two vertical posts.
3. Holding the memory module with the notch on the upper right corner, then insert the memory module into the DIMM socket at 90° angle.
4. Push the two eject levers toward the vertical posts until they click into place. The memory module is now upright.

The system is able to auto detect the new memory size and there is no need to change the system configuration after installation.

Make sure that the memory module you are using can handle the specified SDRAM MHz. Inadequate memory module will make the computer unable to boot up.

5.4. Motherboard Assembly

The motherboard is the first component to be assembled to the system compartment. Follow the steps below to assemble the motherboard to the system chassis. Make sure the CPU with cooling fan and SDRAM are already properly installed to the motherboard before the motherboard is attached to the system chassis. (Refer to Sec. 5-2 and 5-3 for CPU and SDRAM installation).

1. The lower side of the chassis has a rectangle opening at the bottom of the chassis. Make the lower side of the chassis to be near you.
2. From your point of view, the motherboard module is to be installed to the lower side of the system compartment.
3. Tape the motherboard insulator (5) (Fig. 5-1 & 5-2 (5)) to the motherboard (6) first. The insulator is to separate the electronic components on the reverse side of the motherboard from the metal compartment to prevent short circuitry caused during system operation.
4. Fix the motherboard (6) to the chassis with 7 PMS anti-fallen 3*6 screws.

5.5. Touch Controller Assembly

If a touchscreen is integrated with the system, the touchscreen controller is to be installed right after the installation of the motherboard.

For easy maintenance in the future, the touch controller is to be installed to a bracket rather than to the system compartment directly. From your point of view, there is a rectangle opening at the left upper side of the chassis. Insert the touch controller bracket to the opening and retain it to the chassis with 2 FMS 3*5 screws.

For easy assembly, the related cables are to be connected first.

1. For Elo touch, the touchscreen cable (Fig. 5-1 (14)) is a 2*5-pin to 2*5-pin flat cable. Connect one end to the touchscreen controller first.
2. There is a 2-pin (black & red) cable to provide the power source for the touchscreen. Connect one end to the controller.
3. Connect the other end of the 2*5-pin to 2*5-pin flat cable to the onboard COM 3 box header connector and connect the other end of the 2-pin power cable to the motherboard's PWR1.
4. Fix the touchscreen controller (13) to the bracket with 2 PMS 3*6 screws.
5. Fold both cables properly.
6. Make sure the two screws at the outward upper side of the chassis are also properly fixed.

5.6. HDD Module Assembly

The ODYSSE provides enough space to build in a 3.5” hard disk drive in the system compartment. The following steps show the way to install an internal hard disk drive.

1. Make the chassis lower side near you. Now, from your point of view, the 3.5" HDD module is to be installed to the right upper side of the system compartment.
2. Refer to Figure 5-4. Fix the hard disk drive (1) to the HDD bracket (3) with one FTS 3*5 screw.
3. Connect the one end of the 40-pin IDE cable (2) to hard disk drive.
4. There are two clips at the bottom of the compartment used to hold the HDD module to the system compartment. Insert the HDD module to the compartment and clip it into place. Fix the HDD module to the chassis with one 3*5 FMS screw outside of the right upper side of the chassis.
5. Make sure the other end of the 40-pin IDE cable is connected to the motherboard IDE1 connector.

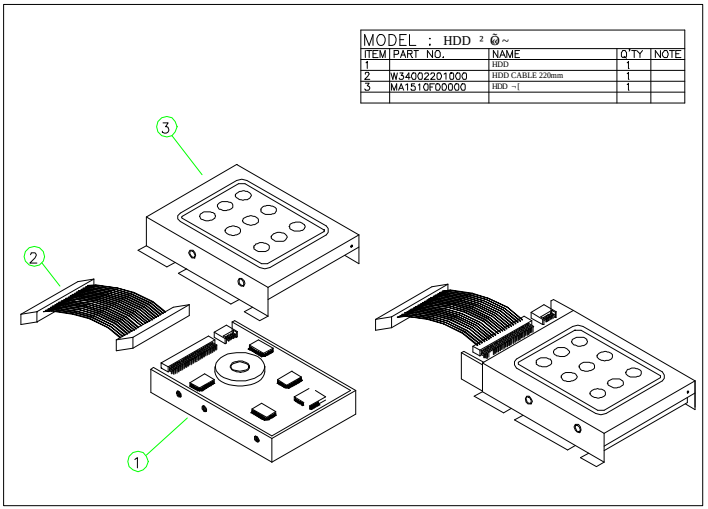


FIGURE 5-4: HDD INSTALLATION

5.7. Touchscreen or Front Bezel Assembly

The ODYSSE is able to accommodate Elo analog resistive touch or Intelli (SAW) touch or MicroTocu capacitive touchscreen. PLEASE NOTE THAT WHEN DIFFERENT TOUCH MODULE IS INSTALLED, DIFFERENT TOUCHSCREEN METAL BRACKETS ARE NEEDED. YOU CAN NOT REPLACE ONE TYPE OF TOUCH PANEL WITH THE OTHER WITHOUT CHANGING THE TOUCHSCREEN METAL BRACKETS USED TO HOLD THE TOUCH PANEL TO THE FRONT BEZEL.

The following steps illustrate the ways to assemble the toucshcreen to the front bezel.

1. There are 4 rubber slips with one-side taped with glue. Glue the 4 slips to the to the reverse side of the front bezel. The 4 rubber slips act as cushions to absorb the pressure when the touchscreen is fixed to the front bezel with screws.
2. There are 4 metal brackets used to fix the touchscreen to the front bezel. The metal brackets have to be taped with soft tapes as shown on Figure 5-6 (7) & (8).
3. Then, fix the touchscreen to the front bezel with the 4 metal brackets with screws. The soft tapes are used to absorb the pressure when the metal brackets fix the touchscreen to the front bezel.

If no toushcreen is installed, there are two options. One is to put a resilient glass instead. The advantage of putting a resilient glass is to protect the LCD panel.

The other option is to fix 4 bronze sticks (6 mm) to the LCD bracket to push the LCD panel forward to make up the gap between the LCD and the front bezel.

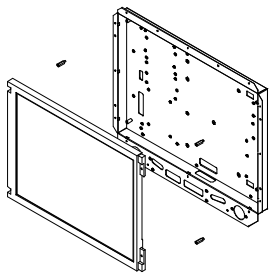


FIGURE 5-5: ODYSSE W/O TOUCH

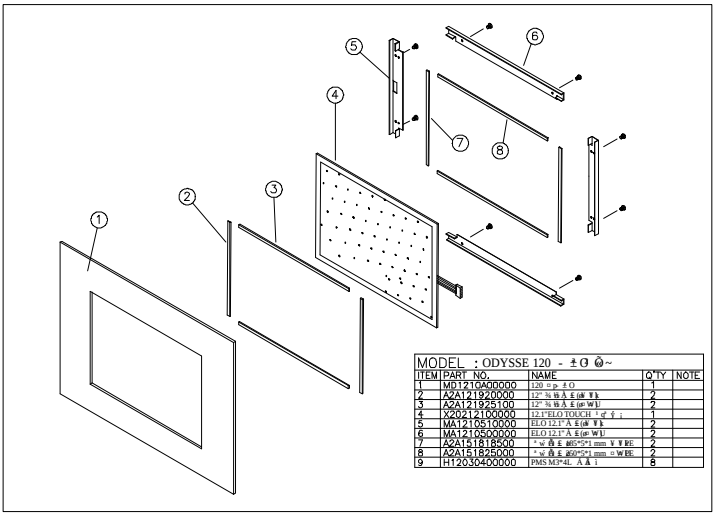


FIGURE 5-6: ODYSSE 120 FRONT BEZEL ASSEMBLY

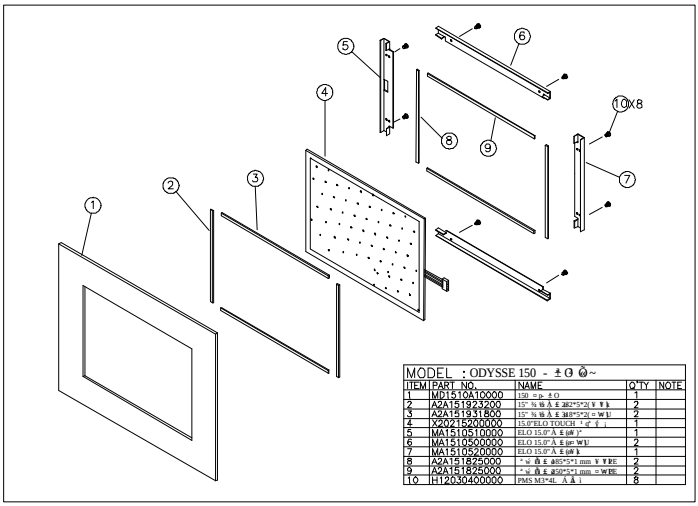


FIGURE 5-7: ODYSSE 150 FRONT BEZEL ASSEMBLY

5.8. LCD Module Assembly

Figure 5-8 and 5-9 illustrate the way to assemble the ODYSSE's LCD module.

The LCD does not fix to the main system directly. Rather, it is to be fixed to a LCD holder, then to the main system. The assembly of ODYSSE 120 LCD module slightly differs from that of ODYSSE 150.

ODYSSE 120

1. Refer to Figure 5-8. There are two LCD brackets (2) & (3) used to fix to the LCD panel (1) to the LCD holder (11) from the up & down sides.
2. Fix the LCD panel to the LCD holder with four PMS 3*8 screws.
3. The standard LCD used in ODYSSE 120 is SANYO MXS121022010 or its equivalent. It is a TTL interface LCD. The LCD cable (4) is a DF9-41S to 2*25-pin cable with around 35 cm in its length. Insert the 41-pin end into the opening at the rear side of the LCD holder and have it firmly plugged to the 41-pin connector at the rear side of the LCD panel.
4. Attach the insulator (10) to the invertor (9).
5. The invertor cable (8) is a 4-pin to 4-pin cable with wafer connectors at both sides. Connect the one end to invertor first. The other end is for later connection to the INV1 on the motherboard.
6. Connect the pink-white high voltage wires from the LCD to the invertor.
7. The invertor module is to be fixed at the right middle side of the LCD holder with the up side down.

ODYSSE 150

1. Refer to Figure 5-9. The standard LCD used in ODYSSE 150 is either 15.1" TTL LG 151X2 or 15" LVDS Chi Mei M150X3-L01 or their equivalent. The assembly of TTL LCD differs from that of the LVDS LCD.
2. Fix the LCD panel (1) to the LCD holder (6) with four PMS 3*8 screws.
3. For the TTL LCD, LM151X2 or its equivalent, the LCD cable (2) is a DF9-41S to 2*25-pin cable with around 35 cm in its length. Insert the 41-pin end into the opening at the rear side of the LCD holder and have it firmly plugged to the 41-pin connector at the rear side of the LCD panel.
4. For the LVDS LCD, M150X3-L01 or its equivalent, as the motherboard's display is a TTL controller, to connect the onboard LCD controller to the LVDS LCD, an LVDS transceiver board is needed.
5. The ODYSSE 150's LVDS transceiver board is to be fixed at the system chassis between the touch controller and HDD.
6. The LCD cable for the LVDS LCD is a DF14-20 to DF14-20 cable with around 35 cm in its length. Connect one end to the connector located at the rear side of the LCD panel with the other end going through the opening at the rear side of the LCD holder for later connection to the LVDS1 on the LVDS board.
7. There is a 2*25-pin to 2*25-pin LVDS cable. Plug one end to the LCD1 on the LVDS board with the other end connected to the 2*25-pin header connector, LCD1 on the motherboard.
8. Attach the insulator (3) to the invertor (4).
9. The invertor cable (5) for ODYSSE 150 is a 7-pin to 4-pin cable with wafer connectors at both sides. Connect the 7-pin end to the invertor first. The other end is for later connection to the INV1 on the motherboard.
10. Connect the pink-white high voltage wires from the LCD to the invertor.

11. The invertor module is to be fixed at the reverse side of the LCD holder after the LCD module is to be installed to the system.

ODYSSE 170

The assembly of ODYSSE 170 LCD module is basically same to that of Chi Mei 15.0" LVDS LCD, LM150X3-L01.

1. The standard LCD used for ODYSSE 170 is an LVDS LCD. As the motherboard's display is a TTL controller, to connect the onboard LCD controller to the LVDS LCD, a LVDS scaling board is needed.
2. The ODYSSE 170's LVDS scaling board is to be fixed at the system chassis between the touch controller and HDD.
3. The LCD cable for the 17.0" LVDS LCD is a JAEFI-30 to DF11-30 (2*15) cable with around 35 cm in its length. Connect JAEFI-30 end to the connector located at the rear side of the LCD panel with the other end going through the opening at the rear side of the LCD holder for later connection to the LVDS1 on the LVDS scaling board.
4. There is a 2*25-pin to 2*25-pin LVDS cable. Plug one end to the CN1 on the scaling board with the other end connected to the 2*25-pin header connector, LCD1 on the motherboard.
5. Attach the insulator (3) to the invertor (4).
6. For ODYSSE 170 III, the invertor cable is a Y-shape 7-pin to 4-pin and 3-pin cable. Connect the 7-pin end to the invertor. The 3-pin end is to be plugged to the INV1 on the scaling board and 4-pin end to the INV1 on the motherboard later.
7. Connect the pink-white high voltage wires from the LCD to the invertor.
8. The invertor module is to be fixed at the reverse side of the LCD holder after the LCD module is to be installed to the system.

*NOTE: DUE TO CHIPSET LIMITATION, THE MAX. RESOLUTION OF TITAN 170 III CAN ONLY BE UP TO 1024*768.*

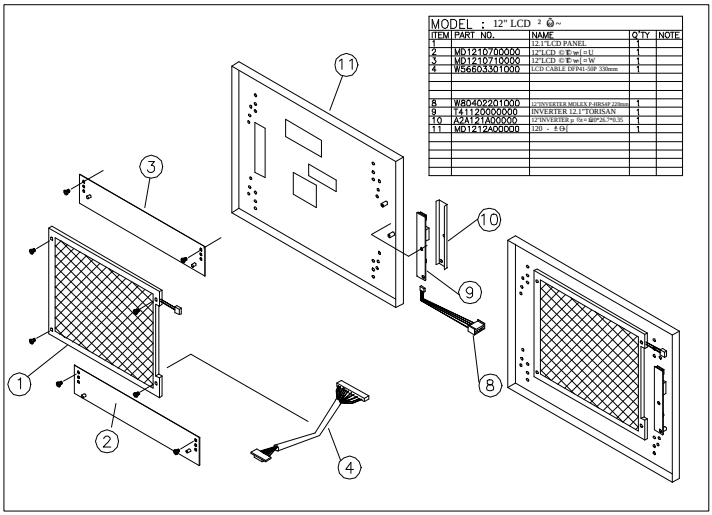


FIGURE 5-8: **ODYSSE 120** LCD MODULE ASSEMBLY

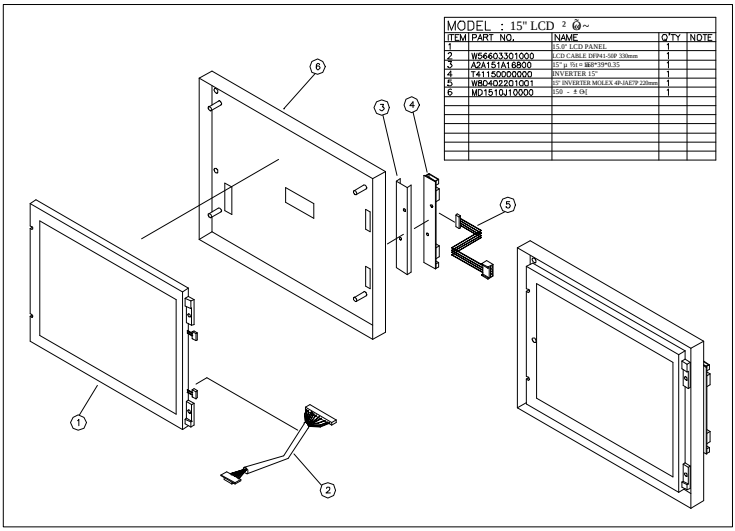


FIGURE 5-9: **ODYSSE 150/170** LCD MODULE ASSEMBLY

After finishing the LCD module installation, the module is to be assembled to the front bezel module, then to the chassis with the motherboard and touch controller already on.

1. Use special air blower to blow any dust between the LCD and touchscreen before the two modules are assembled together. Retain the LCD module and the front bezel module together with 8 FMS 3*6 screws.
2. Install the whole front bezel module with LCD already on to the system chassis with the motherboard, touchscreen controller and HDD module already on.
3. The LVDS or LCD cable is already at the rear side of the LCD holder through the cutout. Make sure the other end is to go through the rectangle opening at the rear side of the system chassis and have it connected to LCD connector, LCD1 on the motherboard.

SPECIAL ATTENTION NEEDS TO BE PAID WHEN PLUGGING THE LVDS OR LCD CABLE TO THE LCD HEADER CONNECTOR ON THE MOTHERBOARD. MAKE SURE PIN 1 OF THE ONBOARD LCD CONNECTOR MATCH PIN 1 OF THE CABLE. ANY WRONG PLUGGING OR SHIFTED PLUGGING WILL DAMAGE THE LCD PANEL OR LEAD TO MAL-FUNCTION.

4. The touchscreen 5-pin flat cable should go through the rectangle opening at the left side of the LCD holder, then get into the chassis from the oval-shape cutout at the left side of the chassis. Connect this cable to the touchcreen controller. Connect the other end of the touch power cable to the onboard PWR 1.
5. For ODYSSE 150/170, the invertor now is to be fixed to the left outward side of the chassis and have the invertor cable go into the chassis through the cutout. Connect the other end of the invertor cable to the motherboard's INV1.

5.9. CD-ROM/DVD-ROM/FDD Module Assembly

The ODYSSE provides enough space to accommodate a CD-ROM or CD-RW or DVD-ROM and a floppy disk drive. The CD-ROM or DVD-ROM drive used in the ODYSSE 120/150 is not the common 5.25" drive seen in computer stores. Rather, it is a slim type drive widely used in notebook computers.

The ODYSSE 120/150 can connect to an external floppy disk drive or an internal slim type floppy disk drive, depending on the system requirement.

Please note that either an external floppy disk drive or internal floppy disk drive can be used.

5.9.1. Internal CD-ROM/FDD Assembly

The following steps show the ways to install an internal CD-ROM or DVD-ROM and floppy disk drive.

1. Make the chassis' lower side near you. Now, from your point of view, the CD-ROM/FDD module is to be installed on the left side of the chassis.
2. Refer to Figure 5-10. Attach the CD-ROM board (4) to the slim CD-ROM (2) and fix them together with 2 IMS screws. *PLEASE NOTE THAT THE 2 SCREWS NEED TO BE INCASED WITH 2 PLASTIC WASHERS (3) TO PREVENT SHORT CIRCUITRY*.
3. Insert the CD-ROM module to the CD-ROM/FDD bracket (9) and fix them together with 2 IMS screws.
4. There is a 40-pin 3-section IDE cable. Connect one end to the CD-ROM board.
5. Attach one end of the 26-pin FDD flat cable (8) to the slim floppy disk drive (7) first.
6. Insert the FDD module to the CD-ROM/FDD bracket and fix them together with 2 IMS screws.
7. There is a small metal bracket (1) used to firmly fix the CD-ROM and FDD modules to the CD-ROM/FDD bracket. To prevent short circuitry, this bracket is to be taped with soft tape. This small bracket is to prevent the CD-ROM/FDD from moving when installed to the FDD/CD-ROM bracket.

8. Connect another end of the 40-pin IDE cable to the motherboard IDE 2 connector.
9. There is a 4-pin CD audio-in cable to be plugged to J2 on the motherboard. Connect the other end of the CD-Audio cable (6) to the 4-pin black pin connector on the CD-ROM board.
10. Connect the other end of the FDD cable to the FDD1 on the motherboard.
11. Fix the whole unit to the chassis and fix them together with 3 FMS 3*5 screws.

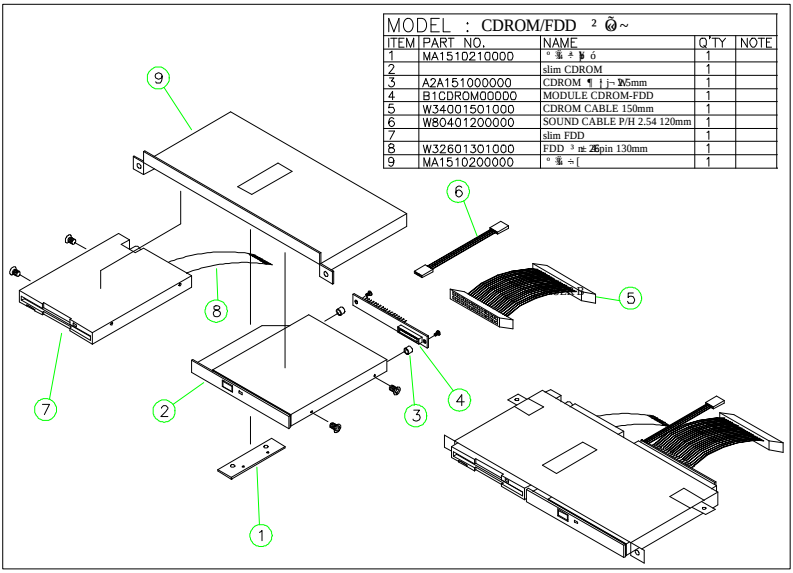

MODEL : CDROM/FDD
ITEM | PART NO. | NAME | Q'TY | NOTE
1 | MA1510210000 | | 1
2 | | slim CDROM | 1
3 | A2A151000000 | CDROM | 1
4 | B1CDROM00000 | MODULE CDROM-FDD | 1
5 | W34001501000 | CDROM CABLE 150mm | 1
6 | W80401200000 | SOUND CABLE P/H 2.54 120mm | 1
7 | | slim FDD | 1
8 | W32601301000 | FDD | 1
9 | MA1510200000 | | 1
1
2
3
4
5
6
7
8
9

FIGURE 5-10: CD-ROM/FDD MODULE ASSEMBLY

5.9.2. External FDD Connection

1. Use the provided 15-34 pin FDD cable (see below figure) to connect to the system's 15-pin FDD D-sub connector located at the rear side of the cover.

FDD cable

2. Connect the other end (34 pin) of the FDD cable to a standard 3.5” FDD. Match pin 1 of the FDD and pin 1 of the cable.
3. To drive the floppy disk drive, it will need 5V power. Connect the provided FDD power cable to the floppy disk drive to the +5V/12V DC-out connector to obtain 5V power for the device.

5.10. Power Module Assembly

The power supply is to be integrated with the power brackets before it is installed to the panel PC system. The following diagram shows the steps to assemble the ATX power module. For the specification of the power supply, please refer to APPENDIX.

1. Refer to Figure 5-11. Attach the power fix bracket (2) to the power supply (3) and fix them together with 2 FMS screws (3*5). This small bracket is used to prevent the power supply from moving around in the power bracket.
2. Insert the power supply to power bracket (1) and fix them together with four 3*5 screws.
3. Manage all the power cables from the power supply properly.
4. Insert the power switch (4) to power bracket (5). The other end of the switch cable is to be connected to the 2-pin POWER ON switch, SW1 on the motherboard.
5. Plug the ATX power cable to the ATX power connector, PWR 3 on the motherboard.
6. Connect the big 4P end of the power cable to the HDD.
7. Connect the small 4P end the CD-ROM board.
8. The power module is to be installed to the system right on the top of the CD-ROM/FDD module.

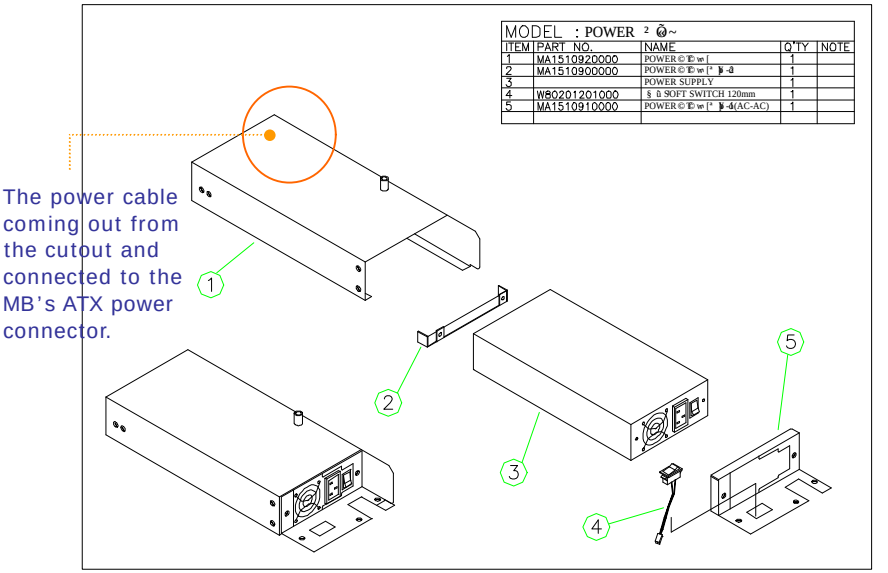


FIGURE 5-11: ODYSSE AC POWER MODULE

5.11. Expansion Outlets & Riser Card Assembly

The ODYSSE 120/150 provides PCI/ISA expansion slots for system expansion. Via the specially designed riser card, the system can accommodate either two PCI or one PCI plus one ISA expansion cards; all the connectors of the expansion card will come out from the expansion outlet on the left side of the chassis for further cable connection.

The expansion outlet bracket has to be installed to the system before plugging the riser card to the motherboard PCI/ISA expansion slot.

1. When the system is reverse with the rear side facing you and lower side near you, the expansion outlets are located at the right upper side of the chassis.

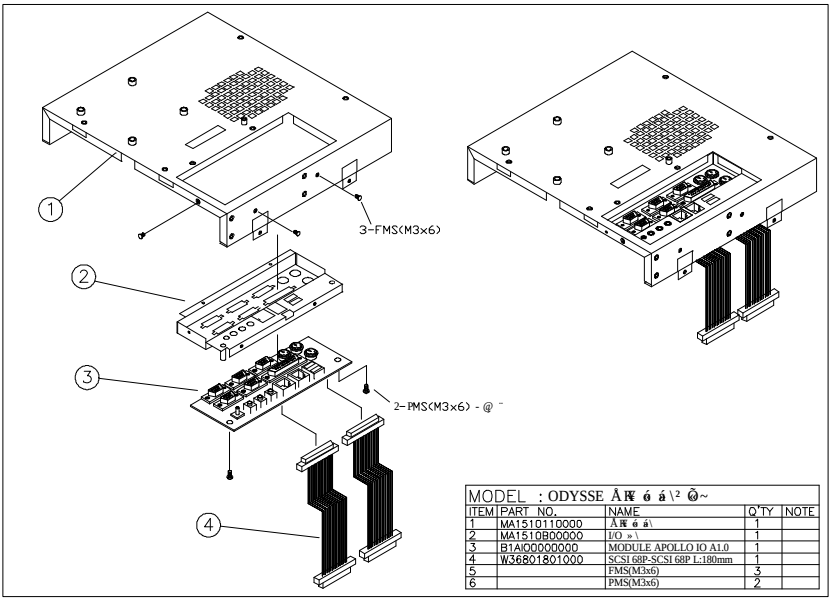
2. Install the expansion window (Fig. 5-1 (11)) to the chassis and fix them together with 2 FMS screws.
3. If no expansion card is plugged to the riser card, seal the expansion outlets with the 2 metal slips located inside the expansion outlet.
4. The riser card (8) is to be fixed with the metal bracket (9) with two FMS screws first. Then, plug the riser card to the onboard PCI/ISA slot. Make sure the riser card is firmly plugged to the motherboard to prevent any bad connection.

Due to the internal space limitation, the expansion card can not exceed 190*120 (L*W) mm if no internal FDD is installed. However if an internal FDD is installed, the ISA card can not exceed 170*120 mm.

5.12. Back Panel Assembly

The back panel module is the last module to be integrated to the ODYSSE main system. Refer to Fig. 5-12.

1. On the I/O board, there are 6 D-SUB connectors with 2 bronze sticks on each side. Remove the 12 bronze sticks.
2. Insert the I/O board to the I/O bracket (2) and fix them together with the 12 bronze sticks. Fix them again with 2 screws on the other side.
3. Fix the complete I/O module to the metal back panel (1) five FMS 3*5 screws.
4. Insert the external IDE board (Fig. 5-1 & 5-2 (20)) to the back panel and connect the 3rd end of the IDE cable to the IDE board with one end already on the CD-ROM board and the other end already on the IDE2 on the motherboard.
5. Connect one end of the 2 68-pin SCSI cables (Fig. 5-12 (4)) to the I/O board (3). Via the 2 SCSI cables, all the onboard I/O signals are converted to the I/O board for device cable connection.
6. Connect the other end of the two SCSI cables to the SCSI 1 and SCSI 2 connectors on the motherboard.
7. Fix the back panel module to the main system.
8. Attach the filtering bracket (Fig. 5-1 & 5-2, 17) to the chassis with 4 FMS screws. For specific environmental application, a filter can be inserted between the chassis and this bracket to prevent dust get into the system.



MODEL : ODYSSE ÂÆ ó á \² Ø~

ITEM	PART NO.	NAME	Q'TY	NOTE
1	MA1510110000	ÂÆ ó á\	1	
2	MA1510B00000	I/O » \	1	
3	B1AI00000000	MODULE APOLLO IO A1.0	1	
4	W36801801000	SCSI 68P-SCSI 68P L:180mm	1	
5		FMS(M3x6)	3	
6		PMS(M3x6)	2	

FIGURE 5-12: ODYSSE BACK MODULE ASSEMBLY

There are three additional metal brackets to be attached to the system to make the ODYSSE a complete unit. Refer to Figure 5-1 & 5-2.

6. SYSTEM MOTHERBOARD & I/O BOARD

The system controller used in the ODYSSE III system is a special-design Celeron/Pentium® III multimedia motherboard. All the onboard signal is connected to an I/O board via 2 SCSI cables for external device connection. This chapter provides jumper definition and connector signal of the motherboard and the I/O board.

6.1. ODYSSE III Motherboard

This section provides background information and detail specification on the ODYSSE 120/150/170 III system engine, PC 610. Sections include:

- ✧ General Information
- ✧ Features
- ✧ Specification
- ✧ Board placement & Dimension

6.1.1. General Information

The **PC 610** is an Intel Celeron/Pentium III (Socket 370) multimedia ATX motherboard with LCD/VGA controller, Ethernet 100/10, AC97 sound, and IDE flash disk. By integrating single chip, SiS630ST, the PC 610 provides a high performance/low cost desktop solution.

Highly integrated, the PC 610 can adapt Intel® Celeron (66/100MHz) and Pentium III (100/133MHz) CPU. Onboard features include four serial ports, one multi–mode Parallel ports, a floppy drive controller and a PS/2 keyboard PS/2 mouse interface. The built-in high speed PCI IDE controller supports both PIO and ATA 100 mode. Up to four IDE devices can be connected, including large hard disks, CD-ROM drives and other IDE devices. The full PC functionality coupled with its multi-I/Os stand ready to accommodate a wide range of PC peripherals. Compact in size and with its highly integrated multimedia and networking functions, the PC 610 is the most powerful PC engine to build any small footprint all-in-one PC system for integration into any space-constricted embedded applications.

Fully configurable and with its modular design, the PC 610 is an ideal platform for any consumer computing applications where space is a premium.

6.1.2. Specifications

PC 610: Multimedia Intel Celeron/Pentium III Motherboard with XGA, LCD, Dual display, Ethernet & Audio Interface

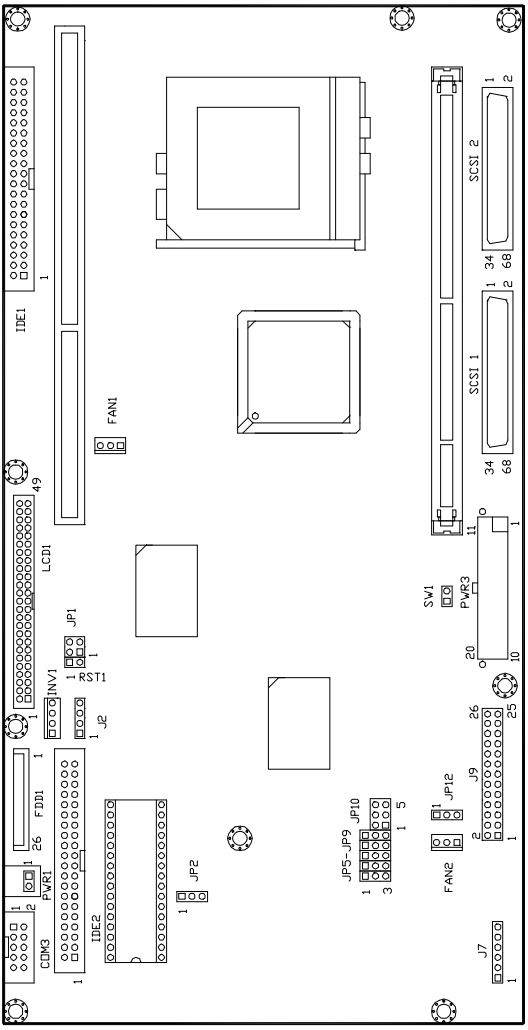
- **CPU**: Intel Socket 370
  - Intel Pentium III FCPGA 1GHz/133MHz
  - Intel Pentium III FCPGA 650-933/133MHz
  - Intel Pentium III FCPGA 500E-850E/100MHz
  - Intel Celeron FCPGA 800MHz-1.10GHz/100MHz
  - Intel Celeron FCPGA 533AMHz-766MHz/66MHz
  - Intel Celeron PPGA 300A-533MHz/66MHz
- **Main Chipset**: SiS630ST
- **System BIOS**: Award PnP Flash BIOS
- **System Memory**: 1 x 168 pin DIMM sockets supporting SDRAM up to 512MB
- **L2 Cache**: CPU built-in
- **Standard I/O**
  - Serial ports x 4
  - Parallel port x 1
  - ATA 100/66 IDE x 2: supports up to 4 IDE devices
  - FDD x 1: supports up to 2 floppy disk drives
  - PS/2 Keyboard Interface x 1
  - Internal Keyboard Interface x 1
  - PS/2 Mouse Interface x 1
  - USB Interface x 4 supporting USB 1.0 devices
- **IrDA:** 5-pin header with CIR support
- **Ethernet**
  - 100/10 Base-T Ethernet
  - Support WAKE-ON-LAN

- **Display**
  - LCD controller
  - Integrated 2D/3D graphics engine, 4X AGP
  - Share system memory architecture able to utilize the display memory size up to 64MB
  - Maximum resolution for video chipset: 640x480, 800x600, 1024x768, 1280x1024, 1600x1200, 1920x1200, True-color
  - Supporting LCD/VGA dual display mode (under Windows 98, Windows ME and Windows XP)
- **Audio Function**
  - Full duplex and independent sample rate converter for audio recording & playback
  - Supports Microsoft DirectSound
  - 3D positional audio effects
  - Hi-performance, mixed-signal, stereo
  - MIC-In, Speaker-Out, Line-In
  - Pin header for CD-audio in
- **Hardware Monitor**
  - Monitoring processor & system
  - Monitoring 5VSB, VBAT, 1.5V, 3.3V, +5V, +12V, -12V, and processor voltages
  - Monitoring processor, chassis fan speeds
  - Controlling processor and chassis fan speed and failure alarm
  - Automatic fan on/off control
  - Read back capability that displays temperature, voltage and fan speed
  - Supporting Intel processor thermal diode output (real processor temperature)
- **Expansion Bus: PCI / ISA x 1**
- **Power:** ATX power
- **Dimension**: 300*146 mm (L*W)

Specifications are subject to change without notice.

6.1.3. Locating Jumpers & Connectors

The following figure helps you to locate the jumpers and connectors on the motherboard.



6.1.4. Jumpers & Jumper Setting

The table below lists the function of each jumper. The related jumper settings are shown in the coming sections.

Jumper	Description
JP1	DOC Address Selection
JP2	Clear CMOS
JP5	COM2 RS-232/422/485 selection
JP6	COM2 RS-232/422/485 selection
JP7	COM2 RS-232/422/485 selection
JP8	COM2 RS-232/422/485 selection
JP9	COM2 RS-232/422/485 selection
JP10	COM2 RS-232/422/485 selection

6.1.4.1. DOC 2000 Address Setting (JP1)

1-2	D000
3-4	D800

6.1.4.2. Clear CMOS (JP2)

1-2	Clear CMOS
3-4	Normal

6.1.4.3. COM 2 232/422/485 Setting (JP5,6,7,8,9 & 10)

COM 2 is a RS-232/422/485 serial port. JP5, 6, 7, 8, 9 and JP10 determine the specific port type.

	RS-232	RS-422	RS-485
JP5	1-2	2-3	2-3
JP6	1-2	2-3	2-3
JP7	1-2	2-3	2-3
JP8	1-2	2-3	2-3
JP9	1-2	2-3	2-3
JP10	1-2	3-4	5-6

6.1.5. Connectors & Pin Assignment

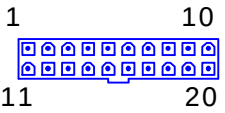
The table below lists the function of each connector on the PC 610. Their corresponding pin assignments will be shown in the following sections.

Connector	Description
PWR1	Power Connector For Touch Screen
PWR2	Power Connector For CD-ROM
PWR3	ATX Power Connector
J2	CD Audio In
J7	HDD LED & ACPI LED & SMI
J8	IR/CIR connector
J9	KB/Mouse/Speaker/LED Connector
SCSI 1	I/O Connector
SCSI 2	I/O Connector
FAN1	CPU FAN Connector
FAN2	System FAN Connector
SW1	ATX Power ON/OFF
LCD	LCD Connector
INV1	LCD Inverter connector
FDD1	FDD connector
IDE1	Primary IDE connector
IDE2	Primary IDE connector
COM3	Serial Port 3 (For Touch Screen)

6.1.5.1. PWR3: ATX Power connector

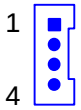
PWR 3 is a standard ATX power connector. This connector is provided to connect to an ATX power supply. The plug of the power supply will only insert in one orientation due to the different hole size. Find the proper orientation and push down the power connector firmly to make sure the pins are aligned. Its pin assignments are listed below:

Pin #	Signal	Pin #	Signal
1	3.3V	11	3.3V
2	3.3V	12	-12V
3	GND	13	GND
4	+5V	14	PSON#
5	GND	15	GND
6	+5V	16	GND
7	GND	17	GND
8	PWROK	18	-5V
9	SB5V	19	+5V
10	+12V	20	+5V



6.1.5.2. J2: CD Audio IN

Pin #	Signal
1	Left channel
2	CD GND
3	CD GND
4	Right channel

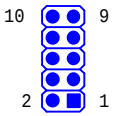


6.1.5.3. J7: HDD LED & ACPI LED & SMI

Pin #	Signal
1	HDD LED+
2	HDD LED-
3	ACPI LED+
4	ACPI LED-
5	SMI
6	GND

6.1.5.4. J8: IR / CIR Connector

IR		CIR	
Pin #	Signal	Pin #	Signal
1	5V	6	NC
2	NC	7	CIRRX
3	IRRX	8	5V (CIR)
4	GND	9	GND
5	IRTX	10	NC



6.1.5.5. J9: Power LED & KB

Pin #	Signal	Pin #	Signal
1	VCC	2	VCC
3	HDD LED	4	LAN LED
5	IR TX	6	GND
7	NC	8	NC
9	(BLK_CTRL1)	10	(BLK_CTRL2
11	GND	12	GND
13	SPK-LO	14	SPK-RO
15	SPK-LN	16	SPK-LN
17	GND	18	GND
19	EXT.KBDAT	20	INT.KBDAT
21	EXT.KBCLK	22	INT.KBCLK
23	EXT.MSDAT	24	INT.MSDAT
25	EXT.MSCLK	26	INT.MSCLK

6.1.5.6. SW1: ATX Power ON/OFF & Reset

Pin #	Signal
1	Power ON/OFF
2	GND

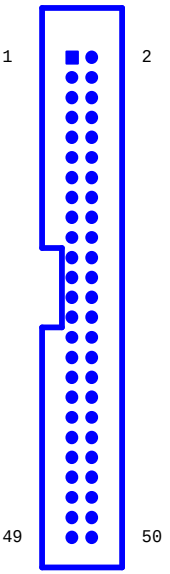
6.1.5.7. COM3

COM 3 is an internal RS-232 reserved for touchscreen. Its corresponding pin assignment is listed as below;

Pin #	Signal	Pin #	Signal
1	DCD	2	DSR
3	RXD	4	RTS
5	TXD	6	CTS
7	DTR	8	RI
9	GND	10	NC

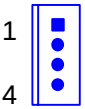
6.1.5.8. LCD1: LCD Connector

Pin #	Signal	Pin #	Signal
1	5V	2	5V
3	GND	4	GND
5	3.3V	6	3.3V
7	VBCAD	8	VBCTL0
9	P00 (B0)	10	P01 (B1)
11	P02 (B2)	12	P03 (B3)
13	P04 (B4)	14	P05 (B5)
15	P06 (B6)	16	P07 (B7)
17	P08 (G0)	18	P09 (G1)
19	P10 (G2)	20	P11 (G3)
21	P12 (G4)	22	P13 (G5)
23	P14 (G6)	24	P15 (G7)
25	P16 (R0)	26	P17 (R1)
27	P18 (R2)	28	P19 (R3)
29	P20 (R4)	30	P21 (R5)
31	P22 (R6)	32	P23 (R7)
33	GND	34	GND
35	SHFCLK	36	FLM
37	DE / M	38	LP
39	GND	40	GND
41	VBCTL1	42	VBCLK
43	GND	44	SSYNC
45	GND	46	VBHCLK
47	ENVB	48	PCIRST#
49	ENEXTPLK	50	INTA#



6.1.5.9. INV1: LCD Inverter Connector

Pin #	Signal
1	Backlight ADJ
2	GND
3	Backlight Enable
4	12V



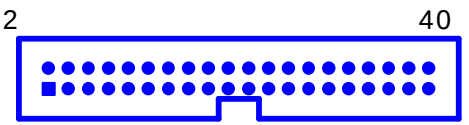
6.1.5.10. FDD1: FDD connector

Pin #	Signal	Pin #	Signal
1	VCC	2	INDEX#
3	VCC	4	DSA#
5	VCC	6	DSKCHG#
7	NC	8	NC
9	NC	10	MOA#
11	NC	12	DIR#
13	RWC#	14	STEP#
15	GND	16	WD#
17	GND	18	WE#
19	GND	20	TRAK0#
21	GND	22	WP#
23	GND	24	RDATA#
25	GND	26	HEAD#

6.1.5.11. IDE1/IDE2: Primary/Secondary HDD

The PC 610 provides 2 sets of 40-pin IDE connectors. The built-in high speed PCI IDE controller supports both PIO and ATA 100 mode. Up to four IDE devices can be connected, including large hard disks, CD-ROM drives and other IDE devices. Their corresponding pin assignments are listed below;

Pin #	**Signal**	**Pin #**	**Signal**
1	RESET#	2	GND
3	DATA 7	4	DATA 8
5	DATA 6	6	DATA 9
7	DATA 5	8	DATA10
9	DATA 4	10	DATA11
11	DATA 3	12	DATA12
13	DATA 2	14	DATA13
15	DATA 1	16	DATA14
17	DATA 0	18	DATA15
19	GND	20	NC
21	IDEREQ	22	GND
23	IOW#	24	GND
25	IOR#	26	GND
27	ICHRDY#	28	GND
29	DACK	30	GND
31	IDEIRQ	32	NC
33	A1	34	LID
35	A0	36	A2
37	IDECS0	38	IDECS1
39	HDD LED	40	GND



6.1.5.12. SCSI 1: Parallel Port/Serial Port/DIO Port

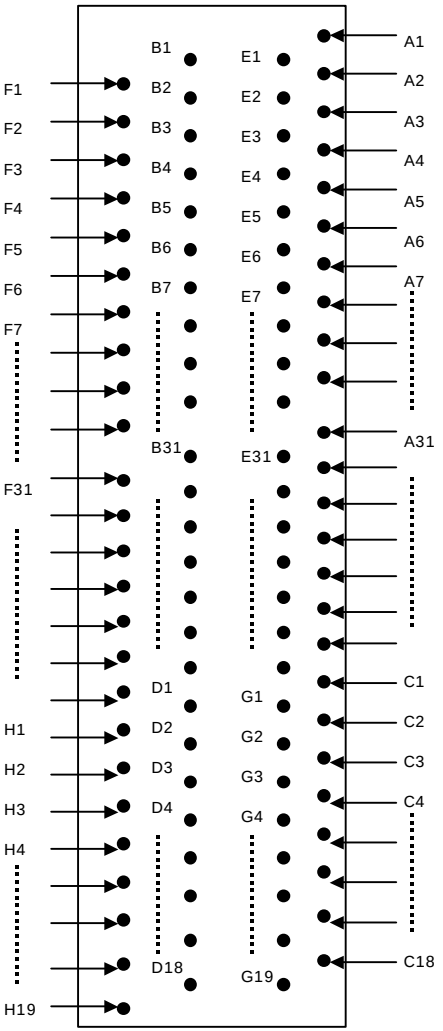
Pin #	Signal	Pin #	Signal
1	GND	35	GND
2	PD0	36	GND
3	PD1	37	RTSA
4	PD2	38	DTRA
5	PD3	39	SOUTA
6	PD4	40	RIA
7	PD5	41	CTSA
8	PD6	42	DSRA
9	PD7	43	SINA
10	STB#	44	DCDA
11	ACK#	45	GND
12	SLIN#	46	RTSB
13	INT#	47	DTRB
14	ERR#	48	SOUTB
15	AFD#	49	RIB
16	SLCT	50	CTSB
17	PE	51	DSRB
18	BUSY	52	SINB
19	GND	53	DCDB
20	IN 0	54	GND
21	IN 1	55	RTSD
22	IN 2	56	DTRD
23	IN 3	57	SOUTD
24	OUT 0	58	RID
25	OUT 1	59	CTSD
26	OUT 2	60	DSRD
27	OUT 3	61	SIND
28	GND	62	DCDD
29	VCC	63	GND
30	VCC	64	+12V
31	VCC	65	+12V
32	VCC	66	+12V
33	VCC	67	+12V
34	VCC	68	+12V

6.1.5.13. SCSI 2: KB/MS/VGA/LAN USB/EXT. FDD

Pin #	Signal	Pin #	Signal
1	GND	35	GND
2	GND	36	GND
3	HSYNC	37	UV0+
4	VSYNC	38	UV0-
5	RED	39	UV1+
6	GREEN	40	UV1-
7	BLUE	41	GND
8	DDCCLK	42	GND
9	DDCDATA	43	GND
10	GND	44	RX+
11	GND	45	RX-
12	GND	46	TX+
13	RWC#	47	TX-
14	INDEX#	48	GND
15	MOA#	49	GND
16	DSA#	50	GND
17	DIR#	51	LINE IN _R
18	STEP#	52	LINE IN_L
19	WD#	53	MIC
20	WE#	54	HP_R
21	TRAK0#	55	HP_L
22	WP#	56	NC
23	RDATA#	57	GND
24	HEAD#	58	GND
25	DSKCHG#	59	GND
26	GND	60	KBDATA
27	GND	61	KBCLK
28	BACK LIGHT	62	MSDATA
29	NC	63	MSCLK
30	VCC3	64	SB5V
31	VCC3	65	SB5V
32	VCC3	66	SB5V
33	VCC3	67	SB5V
34	VCC	68	SB5V

6.1.5.14. CN4: PCI / ISA Expansion Slot

The PC 610 provides an ISA/PCI slot for ISA and PCI device expansion.



CN4: PCI/ISA Slot Side

CN4: PCI/ISA Slot Connector Pin Assignment

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
F1	GND	B1	GND	E1	GND	A1	IOCHK
F2	GND	B2	ISARST	E2	GND	A2	SD7
F3	INTB	B3	Vcc	E3	INTC	A3	SD6
F4	INTA	B4	IRQ9	E4	INTD	A4	SD5
F5	Vcc	B5	-5V	E5	Vcc	A5	SD4
F6	KEY	B6	DRQ2	E6	KEY	A6	SD3
F7	Vcc	B7	-12V	E7	Vcc	A7	SD2
F8	PCICLK1	B8	OWS	E8	PCIRST	A8	SD1
F9	GND	B9	+12V	E9	GNT0	A9	SD0
F10	GNT3	B10	GND	E10	REQ0	A10	IORDY
F11	GND	B11	SMEMW	E11	GND	A11	AEN
F12	REQ3	B12	SMEMR	E12	PCILKE2	A12	SA19
F13	AD31	B13	IOW	E13	GND	A13	SA18
F14	AD29	B14	IOR	E14	AD30	A14	SA17
F15	NC	B15	DACK3	E15	NC	A15	SA16
F16	KEY	B16	DRQ3	E16	KEY	A16	SA15
F17	NC	B17	DACK1	E17	NC	A17	SA14
F18	AD27	B18	DRQ1	E18	AD28	A18	SA13
F19	AD25	B19	REF	E19	AD26	A19	SA12
F20	CBE3	B20	ATCLK	E20	AD24	A20	SA11
F21	AD23	B21	IRQ7	E21	AD22	A21	SA10
F22	AD21	B22	IRQ6	E22	AD20	A22	SA9
F23	AD19	B23	IRQ5	E23	AD18	A23	SA8
F24	NC	B24	IRQ4	E24	NC	A24	SA7
F25	KEY	B25	IRQ3	E25	KEY	A25	SA6
F26	NC	B26	DACK2	E26	NC	A26	SA5
F27	AD17	B27	TC	E27	AD16	A27	SA4
F28	IRDY	B28	ALE	E28	FRAME	A28	SA3

To continue…

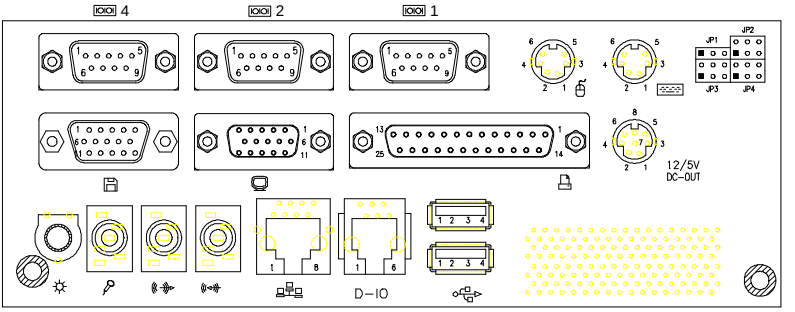
Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
F29	DEVSEL	B29	VCC	E29	CBE2	A29	SA2
F30	LOCK	B30	OSC	E30	TRDY	A30	SA1
F31	PERR	B31	GND	E31	STOP	A31	SA0
H1	SERR	D1	MEMCS16	G1	NC	C1	SBHE
H2	AD15	D2	IOCS16	G2	NC	C2	LA23
H3	AD14	D3	IRQ10	G3	CBE1	C3	LA22
H4	AD12	D4	IRQ11	G4	PAR	C4	LA21
H5	GND	D5	IRQ12	G5	GND	C5	LA20
H6	KEY	D6	IRQ15	G6	KEY	C6	LA19
H7	GND	D7	IRQ14	G7	GND	C7	LA18
H8	AD10	D8	DACK0	G8	AD13	C8	LA17
H9	AD8	D9	DRQ0	G9	AD11	C9	MEMR
H10	AD7	D10	DACK5	G10	AD9	C10	MEMW
H11	AD5	D11	DRQ5	G11	CBE0	C11	SD8
H12	AD3	D12	DACK6	G12	AD6	C12	SD9
H13	AD1	D13	DRQ6	G13	AD4	C13	SD10
H14	AD0	D14	DACK7	G14	AD2	C14	SD11
H15	KEY	D15	DRQ7	G15	KEY	C15	SD12
H16	VCC	D16	VCC	G16	VCC	C16	SD13
H17	VCC	D17	MASTER	G17	VCC	C17	SD14
H18	GND	D18	GND	G18	GND	C18	SD15
H19	GND			G19	GND		

6.2. ODYSSE III I/O Board

All the onboard I/O signal of the ODYSSE motherboard is connected to an I/O board via 2 SCSI cables for external device connection. This section provides jumper definition and connector signal of the I/O board.

6.2.1. Locating Jumpers & Connectors

The following figure helps you to locate the jumpers and connectors on the motherboard.



6.2.2. Jumpers & Jumper Setting

The table below lists the function of each jumper. The related jumper settings are shown in the coming sections.

JP1	Keyboard Connector power selection
JP2	COM1 Pin 9 power selection
JP3	COM2 Pin 9 power selection
JP4	COM4 Pin 9 power selection

6.2.2.1. JP1: Keyboard Power Select

1-2	SB5V
2-3	+5V

6.2.2.2. COM port Power Selection

JP1: COM1 Pin 9 Power selection

JP2: COM2 Pin 9 Power selection

JP4: COM4 Pin 9 Power selection

RI	5V	12V
1-2	3-4	5-6

6.2.3. Connectors & Pin Assignment

The table below lists the function of each connector on the I/O board. Their corresponding pin assignments will be shown in the following sections.

KB1	Keyboard Connector
MS1	Mouse Connector
COM1	Serial Port 1 (3F8)
COM2	Serial Port 2 (2F8)
COM4	Serial Port 4 (2E8)
CN1	DC Power +5V/+12VC output
LPT1	Parallel Port
CRT1	CRT Display Connector
FDD1	External FDD Connector
USB1	USB Connector 1
USB2	USB Connector 2
DIO1	Digital I/O Connector
LAN1	Ethernet Connector
MIC1	Microphone In Connector
LINE1	Line In Connector
SPK1	Speaker Output Connector
VR1	LCD Backlight Control

6.2.3.1. KB1: PS/2 Keyboard Connector

Pin #	Signal
1	KBDATA
2	NC
3	GND
4	SB5V
5	KBCLK
6	NC

6.2.3.2. KBMS: PS/2 Mouse

Pin #	Signal
1	MSDATA
2	NC
3	GND
4	5V
5	MSCLK
6	NC

6.2.3.3. COM1, COM2, COM4: DB-9

Pin #	Signal	Pin #	Signal
1	DCD	6	DSR
2	RXD	7	RTS
3	TXD	8	CTS
4	DTR	9	RI (+5V/12V)
5	GND		

6.2.3.4. CN1: DC Power Output

Pin #	Signal	Pin #	Signal
1	GND	5	+5V
2	GND	6	+12V
3	+5V	7	GND
4	+12V	8	GND

6.2.3.5. LPT1: D-SUB-25 Parallel Port

Pin #	Signal	Pin #	Signal
1	STRB#	14	AFD#
2	DATA 0	15	ERROR#
3	DATA 1	16	INIT#
4	DATA 2	17	SLINT#
5	DATA 3	18	GND
6	DATA 4	19	GND
7	DATA 5	20	GND
8	DATA 6	21	GND
9	DATA 7	22	GND
10	ACK#	23	GND
11	BUSY	24	GND
12	PE	25	GND
13	SLCT		

6.2.3.6. CRT1: VGA (D-SUB 15 Pin)

Pin #	Signal	Pin #	Signal	Pin #	Signal
1	Red	6	GND	11	NC
2	Green	7	GND	12	DDCDATA
3	Blue	8	GND	13	Hsync
4	NC	9	NC	14	Vsync
5	GND	10	GND	15	DDCCLK

6.2.3.7. FDD1: External FDD Connector

Pin #	Signal	Pin #	Signal	Pin #	Signal
1	RWC#	6	WP#	11	RDATA#
2	INDEX#	7	TRAK0#	12	HEAD#
3	MOA#	8	WE#	13	DSKCHG#
4	DSA#	9	WD#	14	GND
5	DIR#	10	STEP#	15	GND

6.2.3.8. J11: USB 1 , USB2 Connector

USB1		USB2	
Pin #	**Signal**	**Pin #**	**Signal**
1	USBVCC	1	USBVCC
2	Data-	2	Data-
3	Data+	3	Data+
4	Gnd	4	Gnd

6.2.3.9. DIO1: RJ-11 Connector

Pin #	Signal	Pin #	Signal
1	+12V	2	IN_0
3	IN_1	4	GND
5	OUT_0	6	OUT_1

6.2.3.10. LAN1: RJ-45 Ethernet Connector

Pin #	Signal	Pin #	Signal
1	TD+	2	TD-
3	RO+	4	NC
5	NC	6	RO-
7	NC	8	NC

6.2.3.11. MIC1

Pin #	Signal
1	Vref
2	NC
3	GND
4	MIC IN
5	GND

6.2.3.12. LINE 1

Pin #	Signal
1	Right CHI
2	GND
3	GND
4	Left CH
5	GND

6.2.3.13. SPK 1

Pin #	Signal
1	Right CHI
2	NC
3	NC
4	Left CH
5	GND

6.2.3.14. SCSI 1: PRT Port/Serial Port/DIO Port

Pin #	Signal	Pin #	Signal
1	GND	35	GND
2	PD0	36	GND
3	PD1	37	RTSA
4	PD2	38	DTRA
5	PD3	39	SOUTA
6	PD4	40	RIA
7	PD5	41	CTSA
8	PD6	42	DSRA
9	PD7	43	SINA
10	STB#	44	DCDA
11	ACK#	45	GND
12	SLIN#	46	RTSB
13	INT#	47	DTRB
14	ERR#	48	SOUTB
15	AFD#	49	RIB
16	SLCT	50	CTSB
17	PE	51	DSRB
18	BUSY	52	SINB
19	GND	53	DCDB
20	IN 0	54	GND
21	IN 1	55	RTSD
22	IN 2	56	DTRD
23	IN 3	57	SOUTD
24	OUT 0	58	RID
25	OUT 1	59	CTSD
26	OUT 2	60	DSRD
27	OUT 3	61	SIND
28	GND	62	DCDD
29	VCC	63	GND
30	VCC	64	+12V
31	VCC	65	+12V
32	VCC	66	+12V
33	VCC	67	+12V
34	VCC	68	+12V

6.2.3.15. SCSI 2: KB/MS/VGA/LAN USB/EXT. FDD

Pin #	Signal	Pin #	Signal
1	GND	35	GND
2	GND	36	GND
3	HSYNC	37	UV0+
4	VSYNC	38	UV0-
5	RED	39	UV1+
6	GREEN	40	UV1-
7	BLUE	41	GND
8	DDCCLK	42	GND
9	DDCDATA	43	GND
10	GND	44	RX+
11	GND	45	RX-
12	GND	46	TX+
13	RWC#	47	TX-
14	INDEX#	48	GND
15	MOA#	49	GND
16	DSA#	50	GND
17	DIR#	51	LINE IN _R
18	STEP#	52	LINE IN_L
19	WD#	53	MIC
20	WE#	54	HP_R
21	TRAK0#	55	HP_L
22	WP#	56	NC
23	RDATA#	57	GND
24	HEAD#	58	GND
25	DSKCHG#	59	GND
26	GND	60	KBDATA
27	GND	61	KBCLK
28	BACK LIGHT	62	MSDATA
29	NC	63	MSCLK
30	VCC3	64	SB5V
31	VCC3	65	SB5V
32	VCC3	66	SB5V
33	VCC3	67	SB5V
34	VCC	68	SB5V

7. AWARD BIOS SETUP

The chapter describes how to set up BIOS configuration.

7.1. Award BIOS

The Award BIOS ROM builds in a setup program, which allows the users to modify the basic system configuration such as the current date and time or the type of peripheral devices attached to the computer.

Under the following conditions, the CMOS settings are to be changed¡ G

1. The system is starting for the first time
2. The hardware devices attached to the systems have been changed
3. The CMOS memory has lost power and the configuration information has been erased.

The BIOS setup program is stored in ROM, which can be accessed by pressing <DEL> key on the keyboard immediately when the system is powered on.

In order to retain the specified setup information when the system power is turned off, the system setup information is stored in a battery-backed CMOS RAM. The battery is to ensure the settings will not be erased when the computer is turned off or reset. When the computer is powered on again, the system will read the settings stored in the CMOS RAM and compare them to the equipment check conducted during the power on self test (POST). If any error or mismatch occurs, an error message will be shown on the screen and the computer will be prompted to run the setup program.

7.2. Control Key Definition

Up arrow	Move to previous item
Down arrow	Move to next item
Left arrow	Move to the item in the left hand
Right arrow	Move to the item in the right hand
ESC key	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
PgUp key	Increase the numeric value or make changes
PgDn key	Decrease the numeric value or make changes
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
F2 key	Change color from total 16 colors
F3 key	Reserved
F4 key	Reserved
F5 key	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
F6 key	Load the default CMOS value from BIOS default table, only for Option Page Setup Menu
F7 key	Load the default
F8 key	Reserved
F9 key	Reserved
F10 key	Save all the CMOS changes, only for Main Menu

7.3. Getting Help

7.3.1. Main Menu

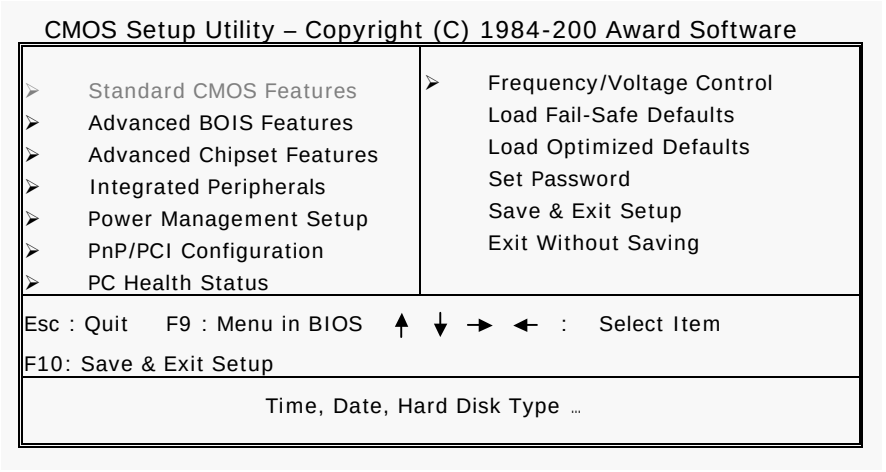
The on-line description of the highlighted setup function is displayed at the bottom of the screen.

Press <F1> to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press <ESC>.

7.4. AWARD BIOS Setup

7.4.1. AWARD BIOS Setup Main Menu

Power on the computer and press <DEL> immediately to run the AWARD BIOS setup. The setup main menu will appear on the screen;



Use the arrow keys to move among the items and press <Enter> to enter the sub-menu.

- **STANDARD CMOS SETUP**: This setup page includes all the items in standard compatible BIOS.
- **ADVANCED BIOS FEATURES**: This setup page includes all the items of Award special enhanced features.
- **ADVANCED CHIPSET FEATURES**: This setup page includes all the items of chipset special features.
- **INTEGRATED PERIPHERALS**: This setup page includes all onboard peripherals.
- **POWER MANAGEMENT SETUP**: This setup page includes all the items of Green function features.
- **PNP / PCI CONFIGURATION**: This setup page includes all the configurations of PCI & PnP ISA resources.
- **PC HEALTH STATUS**: This setup page auto detects the temperature, voltage and fan speed.
- **FREQUENCY / VOLTAGE CONTROL**: This setup page includes the CPU/SDRAM/PCI frequency setting
- **LOAD FAIL-SAFE DEFAULTS**: BIOS Defaults indicates the most appropriate value of the system parameters that the system would be in safe configuration.
- **LOAD OPTIMIZED DEFAULTS**: Setup Defaults indicates the value of the system parameters that the system would be in the best performance configuration.
- **SET PASSWORD**: Change, set, or disable password. It allows you to limit access to the system and Setup, or just to Setup.
- **SAVE & EXIT SETUP**: Save CMOS value settings to CMOS and exit setup.
- **EXIT WITHOUT SAVING**: Abandon all CMOS value changes and exit setup.

7.4.2. Standard CMOS Features

If the **STANDARD CMOS FEATURE** is selected from the main menu, the screen below will appear. This menu allows the users to configure the system components such as date, time, hard disk drive, floppy disk drive and display type. The system BIOS will automatically detect the memory size; therefore no setting is needed.

CMOS Setup Utility – Copyright (C) 1984-200 Award Software
Standard CMOS Features

Date (mm: dd: yy) Tue, Mar 6 2001	Item Help
Time (hh: mm: ss)	Menu Level ▶
➢ IDE Primary Master	Change the day, month,
➢ IDE Primary Slave	year and century
➢ IDE Secondary Master	
➢ IDE Secondary Slave	
Drive A (1.44M, 3.5 in.)	
Drive B (None)	
Video (EGA/VGA)	
LCD Panel ID Select (Type 0)	
Full Screen Function (Disable)	
Halt On (All, But Keyboard)	
Base Memory 640K	
Extended Memory 64448K	
Total Memory 65536K	

↑ ↓ → ←: Move Enter: Select +/-/PU/PD: Value F10: Save
ESC: Exit F1: General Help F5: Previous Values F6: Fail-Safe Defaults
F7: Optimized Defaults

◆ **DATE**

The date format is <day>, <month> <date> <year>.

day	The day, from Sun to Sat, determined by the BIOS and is display-only
month	The month, Jan. through Dec.
date	The date, from 1 to 31 (or the maximum allowed in the month)
year	The year, from 1994 through 2079

◆ **TIME**

The times format in <hour> <minute> <second>. The time is calculated base on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00.

◆ **PRIMARY HDDS / SECONDARY HDDS**

The category identifies the types of hard disk from drive C to F that has been installed in the computer. There are two types: auto type, and user definable type. User type is user-definable; Auto type which will automatically detect HDD type.

Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category.

If you select User Type, related information will be asked to enter to the following items. Enter the information directly from the keyboard and press <Enter>. Such information should be provided in the documentation form your hard disk vendor or the system manufacturer.

CYLS.	Number of cylinders
HEADS	number of heads
PRECOMP	write precomp
LANDZONE	Landing zone
SECTORS	number of sectors

If a hard disk has not been installed select *NONE* and press <Enter>.

◆ **DRIVE A TYPE / DRIVE B TYPE**

The category identifies the types of floppy disk drive A or drive B that has been installed in the computer.

None	No floppy drive installed
360K, 5.25"	5.25 inch PC-type standard drive; 360K byte
1.2M, 5.25"	5.25 inch AT-type high-density drive; 1.2M bytes (3.5 inch when 3 Mode is Enabled).
720K, 3.5"	3.5 inch double-sided drive; 720K byte
1.44M, 3.5"	3.5 inch double-sided drive; 1.44M byte
2.88M, 3.5"	3.5 inch double-sided drive; 2.88M byte

◆ **VIDEO**

The category selects the default video device

Options: EGA/VGA/CGA40/CGA80/Mono

◆ **FULL SCREEN FUNCTION**

Enable/Disable the full screen function

◆ **HALT ON**

The category determines whether the computer will stop if an error is detected during power up.

NO Errors	The system boot will not stop for any error that may be detected
All Errors	Whenever the BIOS detects a non-fatal error the system will be stopped and you will be prompted
All, But Keyboard	The system boot will not stop for a keyboard error; it will stop for all other errors
All, But Diskette	The system boot will not stop for a disk error; it will stop for all other errors
All, But Disk/Key	The system boot will not stop for a keyboard or disk error; it will stop for all other errors

7.4.3. Advanced BIOS Features

If the **ADVANCED BIOS FEATURES** option is selected from the main menu, the screen below will appear. The following sample screen consists of the default values for PC 610.

CMOS Setup Utility – Copyright (C) 1984-200 Award Software
Advanced BIOS Features

Virus Warning	(Disabled)	Item Help
CPU Internal Cache	(Enabled)	Menu Level
External Cache	(Enabled)	
CPU L2 Cache ECC Checking	(Enabled)	Allow you to choose the
Processor Number Feature	(Enabled)	VIRUS warning
Quick Power On Self Test	(Disabled)	features for IDE Hard
First Boot Device	(Disabled)	Disk boot sector
Second Boot Device	(HDD-0)	protection. If this
Third Boot Device	(LS120)	function is enabled and
Boot Other Device	(Enabled)	someone attempt to
Swap Floppy Drive	(Disabled)	write data into this
Boot up Floppy Seek	(Enabled)	area, BIOS will show a
Boot up NumLock Status	(ON)	warning message on
Gate A20 Option	(Fast)	the screen and alarm
Typematic Rate Setting	(Disabled)	beep
x Typematic Rate (Chars/Sec)	6	
x Typematic Rate Delay (Msec)	250	
Security Option	(Setup)	
OS Select For DRAM > 64MB	(Non-OS2)	
Report NO FDD for Win 95	(No)	
Video BIOS Shadow	(Enabled)	

↑ ↓ → ←: Move Enter: Select +/-/PU/PD: Value F10: Save
ESC: Exit F1: General Help F5: Previous Values F6: Fail-Safe Defaults
F7: Optimized Defaults

◆ VIRUS WARNING

Allows you to choose the VIRUS Warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep.

Enabled Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Disabled No warning message will appear when anything attempts to access the boot sector or hard disk partition table.

◆ CPU INTERNAL CACHE / EXTERNAL CACHE

These two categories speed up memory access. However, it depends on CPU/chipset design.

Enabled Enable cache

Disabled Disable cache

◆ CPU L2 CACHE ECC CHECKING

This item allows you to enable/disable CPU L2 Cache ECC checking.

The choice: *Enabled* & *Disabled*.

◆ PROCESSOR NUMBER FEATURE

Some of the new generation of socket-370 processors are installed with a unique processor number. This number may be used for verification in Internet transactions and e-commerce. If you prefer not to use or distribute the unique processor number, use this item to suppress the processor number.

The choice: *Enabled* & *Disabled*.

◆ **QUICK POWER ON SELF TEST**

This category speeds up Power On Self Test (POST) after you power up the computer. If it is set to Enable, BIOS will shorten or skip some check items during POST.

Enabled Enable quick POST

Disabled Normal POST

◆ **FIRST / SECOND / THIRD / OTHER BOOT DEVICE**

The BIOS attempts to load the operating system from the devices in the sequence selected in these items.

The Choice: Floppy, LS/ZIP, HDD, SCSI, CDROM & Disabled.

◆ **SWAP FLOPPY DRIVE**

If the system has two floppy drives, you can swap the logical drive name assignments.

The choice: *Enabled* & *Disabled*.

◆ **BOOT UP FLOPPY SEEK**

Seeks disk drives during boot up. Disabling speeds boot up.

The choice: *Enabled* & *Disabled*.

◆ **BOOT UP NUMLOCK STATUS**

Select power on state for NumLock.

The choice: *Enabled* & *Disabled*.

◆ **GATE A20 OPTION**

Select if chipset or keyboard controller should control GateA20.

Normal A pin in the keyboard controller controls GateA20

Fast Lets chipset control GateA20

◆ **TYPEMATIC RATE SETTING**

Key strokes repeat at a rate determined by the keyboard controller.

When enabled, the typematic rate and typematic delay can be selected.

The choice: *Enabled* & *Disabled*.

◆ **TYPEMATIC RATE (CHARS/SEC)**

Sets the number of times a second to repeat a key stroke when you hold the key down.

The choice: 6, 8, 10, 12, 15, 20, 24 & 30.

◆ **Typematic Delay (Msec)**

Sets the delay time after the key is held down before it begins to repeat the keystroke.

The choice: 250, 500, 750 & 1000.

◆ **SECURITY OPTION**

Select whether the password is required every time the system boots or only when you enter setup.

System The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.

Setup The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt.

Note: To disable security, select PASSWORD SETTING at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.

◆ **OS SELECT FOR DRAM > 64MB**

Select the operating system that is running with greater than 64MB of RAM on the system.

The choice: Non-OS2, OS2.

◆ **REPORT NO FDD FOR WIN 95**

Whether report no FDD for Win 95 or not.

The choice: Yes & No.

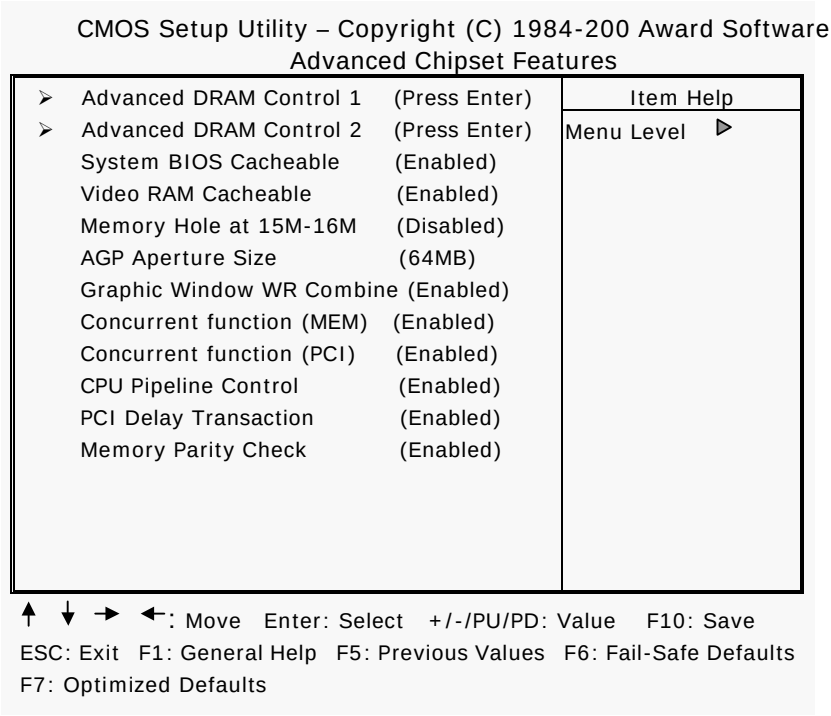
◆ **VIDEO BIOS SHADOW**

This item allows the video BIOS to be copied to system memory for faster performance.

The choice: *Enabled* & *Disabled*.

7.4.4. Advanced Chipset Features

If the **ADVAMCED CHIPSET FEATURES** option is selected from the main menu, the screen below will appear. The following sample screen consists of the default values for PC 610.


CMOS Setup Utility – Copyright (C) 1984-200 Award Software
Advanced Chipset Features
Advanced DRAM Control 1 (Press Enter)
Advanced DRAM Control 2 (Press Enter)
System BIOS Cacheable (Enabled)
Video RAM Cacheable (Enabled)
Memory Hole at 15M-16M (Disabled)
AGP Aperture Size (64MB)
Graphic Window WR Combine (Enabled)
Concurrent function (MEM) (Enabled)
Concurrent function (PCI) (Enabled)
CPU Pipeline Control (Enabled)
PCI Delay Transaction (Enabled)
Memory Parity Check (Enabled)
Item Help
Menu Level
: Move Enter: Select +/-/PU/PD: Value F10: Save
ESC: Exit F1: General Help F5: Previous Values F6: Fail-Safe Defaults
F7: Optimized Defaults

◆ ADVANCED DRAM CONTROL 1 / 2 SETTINGS

The first chipset settings deal with CPU access to dynamic random access memory (DRAM). The default timings have been carefully chosen and should only be altered if data is being lost. Such a scenario might well occur if your system had mixed speed DRAM chips installed so that greater delays may be required to preserve the integrity of the data held in the slower memory chips.

◆ AUTO CONFIGURATION

This item will automatically configure the chipset timing. You may select 'manual' to set up following gray items by your specific need.

The choice: Manual, Auto, 100MHz or 133MHZ.

◆ SDRAM RAS ACTIVE TIME

This item defines SDRAM ACT to PRE command period.

The Choice: 6T, 7T, 5T, 4T.

◆ SDRAM RAS Precharge Time

This item defines SDRAM PRE to ACT command period.

The Choice: 3T, 2T, 4T, Reserved.

◆ RAS TO CAS DELAY

This item defines SDRAM ACT to Read/Write command period.

The choice: 3T, 2T, 4T, Reserved.

◆ DRAM BACKGROUND COMMAND

This item is lead-off time control for DRAM background command. When select 'Delay 1T', background commands are issued 1 clock behind memory address (MA) been issued. When select 'Normal', background command and MA are issued at the same time.

The choice: *Delay 1T* or *Normal*.

◆ LD-OFF DRAM RD / WR CYCLES

The item is lead-off time control for DRAM Read/Write Cycles. When select 'Delay 1T', memory read/write command is issued 1 clock behind memory address (MA) been issued. When select 'Normal', read/write command amd MA are issued at the same time.

The choice: *Delay 1T* or *Normal*.

◆ WRITE RECOVERY TIME

This item defines the Data-in to PRE command period.

The choice: 1T or 2T

◆ VCM REF TO ACT / REF DELAY

This item defines VCM REF to REF/ACT command period.

The choice: 10T, or 9T.

◆ VCM ACCT TO ACT / REF DELAY

This item defines VCM ACT to ACT/REF command period.

The choice: 10T, 9T, 8T or Reserved.

◆ EARLY CKE DELAY 1T CNTRL

When this item is enabled, CKE is driven out from flip-flop. It is used when system operates under low frequency and CKE delay adjustment method defined in the 'Early CKE Delay Adjustment' which can not meet setup time and hold time requirement.

The choice: Normal, Delay 1T.

◆ Early CKE Delay Adjust

This item controls the timing for CKE. Various delay options are provided to ensure that CKE can meet SDRAM setup time and hold time specification when CKE is driven out.

The Choice: 1ns, 2ns, 3ns, 4ns, 5ns, 6ns, 7ns, 8ns.

◆ MEM COMMAND OUTPUT TIME

This item is to control the timing to drive memory command onto memory bus.

The choice: Normal, Delay 1T.

◆ SDRAM / VCM CAS LATENCY

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.

The Choice: 2, 3 or SPD

◆ SDRCLK CONTROL

This item controls the phase of SDRCLK that lags behind SDCLK.

The choice: *Enabled* or *Disabled*.

◆ SDWCLK CONTROL CS# / CKE

This item controls the phase of SDWCLK used for chip set select signals pin that lags ahead SDCLK.

The choice: *Enabled* or *Disabled*.

◆ SDWCLK CONTROL MA / SRAS

This item controls the phase of SDWCLK used for MA/ SRAS signals that lags ahead SDCLK.

The choice: +5.0ns~-2.5ns (Default 0.0ns)

◆ SDWCLK CONTROL DQM / MD

This item controls the phase of SDWCLK used for DQM/MD signals that lags ahead SDCLK.

The choice: +5.0ns~-2.5ns (Default 0.0ns)

◆ EGMRCLK CONTROL

This item controls the phase of EGMRCLK that lags behind SDCLK.

The choice: -1.0ns~+6.5ns (Default 0.0ns)

◆ EGMWCLK CONTROL

This item controls the phase of EGMWCLK that lags ahead SDCLK.

The choice: +5.0ns~-2.5ns (Default 0.0ns)

◆ **SYSTEM BIOS CACHEABLE**

Selecting Enabled allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

The choice: *Enabled* or *Disabled*.

◆ **VIDEO RAM CACHEABLE**

Select Enabled allows caching of the video RAM , resulting in better system performance. However, if any program writes to this memory area, a system error may result.

The choice: *Enabled* or *Disabled*.

◆ **MEMORY HOLE AT 15M-16M**

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. The user information of peripherals that need to use this area of system memory usually discusses their memory requirements.

The choice: *Enabled* or *Disabled*.

◆ **AGP APERTURE SIZE**

Select the size of Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.

The Choice: 4M, 8M, 16M, 32M, 64M, 128M, 256M.

◆ **GRAPHIC WINDOW WR COMBIN**

Use this item to enable or disable CPU support for WR Combin.

The choice: *Enabled* or *Disabled*.

◆ **CONCURRENT FUNCTION (MEM)**

This item is CPU & PCI Masters Concurrently Access Memory Function. Select enabled allows CPU access memory cycles and PCI masters access memory cycles concurrently issued onto host bus and PCI bus, respectively, and then the memory access cycles will be rearranged by SiS630 to memory sequentially.

The choice: *Enabled* or *Disabled*.

◆ **CONCURRENT FUNCTION (PCI)**

This item is CPU & PCI Masters Concurrently Access PCI Bus Function. Select enabled allows CPU access PCI bus cycle and PCI masters access memory cycles concurrently issued onto host bus and PCI bus, respectively.

The choice: *Enabled* or *Disabled*.

◆ **CPU PIPELINE CONTROL**

When enabled this item, only one pending cycle is allowed at one time.

When disabled, there might be more than two pending cycles at one time depends on the CPU behavior.

The choice: *Enabled* or *Disabled*.

◆ **PCI DELAY TRANSACTION**

If the chipset has an embedded 32-bit write buffer to support delay transaction cycles, you can enable this item to provide compliance with PCI Ver.2.1 specifications. We recommend that you leave this item at the default value.

The choice: *Enabled* or *Disabled*.

◆ **MEMORY PARITY CHECK**

Enabled this item to test the boot-up memory. .

The choice: *Enabled* or *Disabled*.

7.4.5. Integrated Peripherals

If the **INTEGRATED PERIPHERALS** option is selected from the main menu, the screen below will appear. The following sample screen consists of the default values for PC 610.

CMOS Setup Utility – Copyright (C) 1984-200 Award Software
Advanced BIOS Features

SIS 630 OnChip IDE Device	(Press Enter)	Item Help
SIS 630 OnChip PCI Device	(Press Enter)	Menu Level ▷
USB Controller	(Enabled)	
USB Keyboard Support	(Disabled)	
IDE HDD Block Mode	(Enabled)	
Onboard FDC Controller	(Enabled)	
Onboard Serial Port 1	(3F8/IRQ4)	
Onboard Serial Port 2	(2F8/IRQ3)	
UART Mode Select	(Normal)	
RxD, TxD Active	(Hi, Lo)	
IR Transmission Delay	(Enabled)	
UR2 Duplex Mode	(Half)	
Use IR Pins	(IR-Rx2Tx2)	
IR Transmission Delay	(Enabled)	
Onboard Parallel Port	(378/IRQ7)	
Parallel Port Mode	(SPP)	
EPP Mode Select	(EPP1.7)	
ECP Mode Use DMA	(3)	
Game Port Address	(201)	
Midi Port Address	(330)	
Midi Port IRQ	(5)	
Onboard Serial Port 3	(3E8)	
Serial Port 3 Use IRQ	(IRQ 10)	
Onboard Serial Port 4	(2E8)	
Serial Port 4 Use IRQ	(IRQ 11)	
Init Display First	(PCI slot)	
Fast Write Capability	(Enabled)	
AGP 4X Capability	(Enabled)	
AGP Auto Calibration	(Enabled)	
System Share Memory……	(8MB)	
Extended Graphic Memory		

SIS 630 ONCHIP IDE DEVICE

◆ INTERNAL PCI / IDE

This chipset contains an internal PCI IDE interface with support for two IDE channels.

The choice: Primary, Secondary or Both.

◆ IDE Primary Master/Slave PIO

The four IDE PIO (Programmed Input / Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In *Auto* mode, the system automatically determines the best mode for each device.

The choice: Auto, Mode 0, Mode 1, Mode 2, Mode 3 or Mode 4.

◆ PRIMARY MASTER/SLAVE ULTRADMA

UDMA (Ultra DMA) is a DMA data transfer protocol that utilizes ATA commands and the ATA bus to allow DMA commands to transfer data at a maximum burst rate of 33 MB/s. When you select *Auto* in the four IDE UDMA fields (for each of up to four IDE devices that the internal PCI IDE interface supports), the system automatically determines the optimal data transfer rate for each IDE device.

The choice: Auto or Disabled.

◆ IDE BURST MODE

Selecting *Enabled* reduces latency between each drive read/write cycle, but may cause instability in IDE subsystems that cannot support such fast performance. If you are getting disk drive errors, try setting this value to *Disabled.* This field does not appear when the Internal PCI/IDE field, above, is *Disabled.*

The choice: *Enabled* or *Disabled.*

SIS 630 ONCHIP PCI DEVICE

◆ SIS-7018 AC97 AUDIO

Select *Enabled* to support AC97 Audio.

The choice: *Enabled* or *Disabled.*

◆ SIS-900 10/100M ETHERNET

This item provides a total communication solution including 10/100Mb Fast Ethernet for Office requirement and 1Mb HomePNA for Home Networking.

The choice: *Enabled* or *Disabled.*

◆ ONBOARD FDC CONTROLLER

Select Enabled if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install and-in FDC or the system has no floppy drive, select Disabled in this field.

The choice: *Enabled* or *Disabled.*

◆ ONBOARD SERIAL PORT 1/PORT 2/PORT 3/PORT 4

Select an address and corresponding interrupt for the first and second serial ports.

The choice: 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ10, 2E8/IRQ11, Disabled or Auto.

◆ UART MODE SELECT

This item allows you to select UART mode.

The choice: *Enabled* or *Disabled.*

◆ UR2 DUPLEX MODE

This item allows you to select the IR half/full duplex funcion.

The choice: Half or Full.

◆ ONBOARD PARALLEL PORT

This item allows you to determine access onboard parallel port controller with which I/O address.

The choice: 3BC/IRQ7, 378/IRQ7, 278/IRQ5, Disabled.

◆ **PARALLEL PORT MODE**

Select an operating mode for the onboard parallel (printer) port. Select *Normal, Compatible,* or *SPP* unless you are certain your hardware and software both support one of the other available modes.

The choice: SPP, EPP, ECP, ECP+EPP.

◆ **ECP MODE USE DMA**

Select a DMA channel for the parallel port for use during ECP mode.

The choice: 3, 1.

◆ **USB CONTROLLER**

Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals.

The choice: *Enabled* or *Disabled.*

◆ **USB KEYBOARD SUPPORT**

Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.

The choice: *Enabled* or *Disabled.*

◆ **IDE HDD BLOCK MODE**

Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support.

The choice: *Enabled* or *Disabled.*

◆ **INIT DISPLAY FIRST**

This item allows you to decide to active which bus first (PCI Slot or AGP first).

The choice: PCI Slot or, AGP.

◆ **SYSTEM SHARE MEMORY SIZE**

This item defines the System Share Memory Size for video.

The choice: 2MB, 4MB, 8MB, 16MB, 32MB, 64MB

7.4.6. Power Management Setup

If the **POWER MANAGEMENT SETUP** option is selected from the main menu, the screen below will appear. The following sample screen consists of the default values for PC 610.

CMOS Setup Utility – Copyright (C) 1984-200 Award Software
Power Management Setup

ACPI function	(Enabled)	Item Help
ACPI Suspend Type	(S3 (STR))	Menu Level ▷
Video OFF Option	(Susp, Stby - Off)	
Video Off Method	(V/H, SYNC+B) ank)	
Switch Function	(Break/Wake)	
Modem Use IRQ	(3)	
Hot Key Function As	(Power Off)	
HDD Off After	(Disable)	
Power Button Override	(Instant Off)	
Power Status Resume Control	(Always Off)	
➢ PM Wake Up Event	(Press Enter)	

↑ ↓ → ←: Move Enter : Select +/-/PU/PD: Value F10: Save
ESC: Exit F1: General Help F5: Previous Values F6: Fail-Safe Defaults
F7: Optimized Defaults

◆ ACPI FUNCTION

This item allows you to enable/disable the Advanced Configuration and Power Management (ACPI).

The choice: *Enabled* or *Disabled*.

◆ ACPI SUSPEND TYPE

This item allows you to S1(Power ON Suspend)/S3(Suspend To RAM) the Advanced Configuration and Power Management (ACPI).

The choice: S1(POS) or S3(STR).

◆ VIDEO OFF OPTION

When enabled, this feature allows the VGA adapter to operate in a power saving mode.

Always On Monitor will remain on during power saving modes.

Suspend -->

Off

Monitor blanked when the systems enters the Suspend mode.

Susp,Stby -->

Off

Monitor blanked when the system enters either Suspend or Standby modes.

All Modes -->

Off

Monitor blanked when the system enters any power saving mode.

◆ **VIDEO OFF METHOD**

This determines the manner in which the monitor is blanked.

V/H

SYNC+Blank

This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer. Blank Screen This option only writes blanks to the video buffer. DPMS Select this option if your monitor supports the Display Power Management Signaling (DPMS) standard of the Video Electronics Standards to select video power management values.

◆ **SWITCH FUNCTION**

You can choose whether or not to permit your system to enter complete Suspend mode. Suspend mode offers greater power savings, with a correspondingly longer awakening period..

The choice: Break/Wake, Disabled.

Hot Key Function As Select *Enabled* if your system has a hot key for soft power off.

The choice: *Enabled* or *Disabled*.

◆ **HDD OFF AFTER**

By default, this item is *Disabled*, meaning that no matter the mode the rest of the system, the hard drive will remain ready. Otherwise, you have a range of choices from 1 to 15 minutes or Suspend. This means that you can elect to have your hard disk drive be turned off after a selected number of minutes or when the rest of the system goes into a Suspend mode.

◆ **POWER BUTTON OVER RIDE**

You could press the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has “hung.”

The choice: Soft-Off, Delay 4 Sec.

PM WAKE UP EVENTS

◆ IRQ [3-7,9-15], NMI

The following is a list of IRQ's, Interrupt ReQuests, which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.

As above, the choices are *On* and *Off.*

When set *On*, activity will neither prevent the system from going into a power management mode nor awaken it.

- IRQ [3-7, 9-15], NMI
- IRQ 8 Break Suspend: You can *Enable* or *Disable* monitoring of IRQ8 (the Real Time Clock) so it does not awaken the system from Suspend mode.

◆ RING / PCIPME POWER UP CONTROL

When you select *Enabled,* a signal from ring / PCIPME returns the system to Full On state.

The choice: *Enabled* or *Disabled*.

◆ KB POWER ON PASSWORD

This item can be used to prompt the used for a password when the system power is resumed by keyboard action.

The choice: *Enabled* or *Disabled*.

◆ POWER UP BY ALARM

When you select *Enabled,* the following fields appear. They let you set the alarm that returns the system to Full On state.

Date (of Month) Alarm lets you select a day from 1 to 31 . Time Alarm lets you select a time for the alarm in hours , minutes , and seconds .

The choice: *Enabled* or *Disabled*.

7.4.7. PnP/PCI Configuration

If the **PNP/PCI CONFIGURATION** option is selected from the main menu, the screen below will appear. The following sample screen consists of the default values for PC 610.

CMOS Setup Utility – Copyright (C) 1984-200 Award Software
PnP PCI Configuration

Reset Configuration Data	(Disabled)	Item Help
Resources Controlled By	(Auto(ESCD))	Menu Level ▶
x IRQ Resources	Press Enter	Default is Disabled. Select Enabled to rest Extended System Configuration Data ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot
PCI/VGA Palette Snoop	(Disabled)	

↑ ↓ → ←: Move Enter : Select +/-/PU/PD: Value F10: Save
ESC: Exit F1: General Help F5: Previous Values F6: Fail-Safe Defaults
F7: Optimized Defaults

◆ **RESET CONFIGURATION DATA**

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot.

The choice: *Enabled* or *Disabled*.

◆ **RESOURCE CONTROLLED BY**

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices.

However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows®95. If you set this field to "manual" choose specific resources by going into each of the sub menu that follows this field (a sub menu is preceded by a "➢").

The choice: Auto(ESCD), Manual.

◆ **IRQ RESOURCES**

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

◆ **IRQ3/4/5/7/9/10/11/12/14/15 ASSIGNED TO**

This item allows you to determine the IRQ assigned to the ISA bus and is not available to any PCI slot. Legacy ISA for devices compliant with the original PC AT bus specification, PCI/ISA PnP for devices compliant with the Plug and Play standard whether designed for PCI or ISA bus architecture.

The Choice: *Legacy ISA* and *PCI/ISA PnP*.

◆ **PCI / VGA PALETTE SNOOP**

Leave this field at *Disabled*.

The choice: *Enabled* or *Disabled*.

7.4.8. PC Health Status

The **PC HEALTH STATUS** auto detects the system's temperature, voltage and fan speed.

CMOS Setup Utility – Copyright (C) 1984-200 Award Software
PC Health Status

CPU Warning Temperature	(Disabled)	Item Help
Current System Temp.		Menu Level ▶
Current CPU1 Temperature		
Current FAN1 Speed		
Current FAN2 Speed		
CPU VCore		
VIO 3.3V		
+ 5 V		
+12 V		
- 12 V		
- 5 V		
VBAT (V)		
5VSB (V)		
Shutdown Temperature	(Disabled)	

↑ ↓ → ←: Move Enter: Select +/-/PU/PD: Value F10: Save
ESC: Exit F1: General Help F5: Previous Values F6: Fail-Safe Defaults
F7: Optimized Defaults

7.4.9. Frequency Voltage Control

This setup page is for the CPU, SDRAM and PCI frequency setting.

CMOS Setup Utility – Copyright (C) 1984-200 Award Software
Frequency Voltage Control

Auto Detect DIMM/PCI Clk	(Enabled)	Item Help
Spread Spectrum	(Disabled)	Menu Level ▶
CPU Host/SDRAM/PCI Clock	(Default)	

↑ ↓ → ←: Move Enter : Select +/-/PU/PD: Value F10: Save
ESC: Exit F1: General Help F5: Previous Values F6: Fail-Safe Defaults
F7: Optimized Defaults

◆ **AUTO DETECT DIMM/PCI CLK**

This item allows you to enable/disable auto detect DIMM/PCI Clock.

The choice: *Enabled* or *Disabled*.

◆ **SPREAD SPECTRUM**

This item allows you to enable/disable the spread spectrum modulate.

The choice: *Enabled* or *Disabled*.

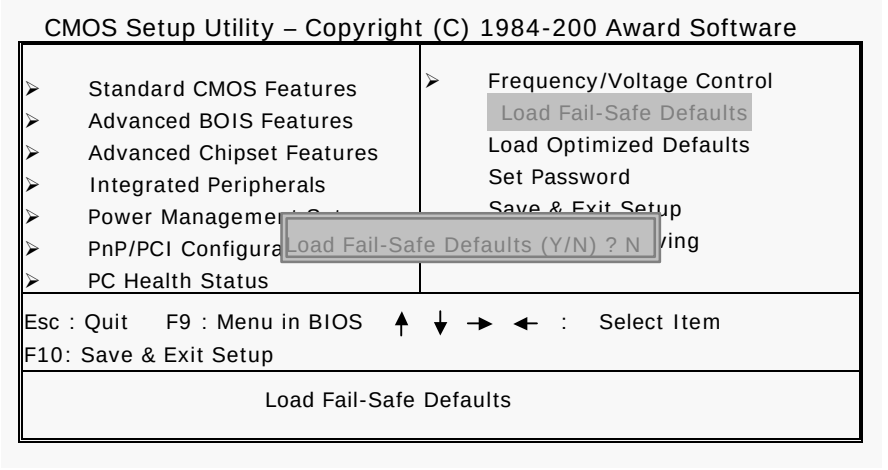
◆ **CPU HOST/DRAM/PCI CLOCK**

This item allows you to select CPU/PCI frequency.

The choice: Auto Detect, 66/66/33MHz, 66/100/33MHz, 100/100/33MHz, 100/133/33MHz, 133/100/33MHz, 133/133/33MHz

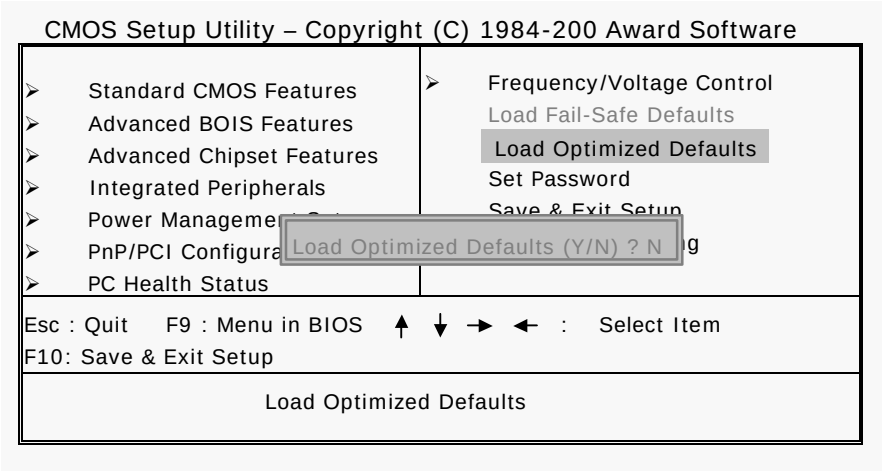
7.4.10. Load Fail-Safe Defaults

The default values of the **LOAD FAIL-SAFE DEFAULTS** indicates the most appropriate value of the system parameters that the system would be in safe configuration.



7.4.11. Load Optimized Defaults

The default values of the **LOAD OPTIMIZED DEFAULTS** indicates the most appropriate value of the system parameters that the system would be in best performance configuration.



7.4.12. User Password

The **USER PASSWORD** is used to set the password. To change the password, select this option from the main menu and press <Enter>.

If the CMOS does not work properly or the **USER PASSWORD** option is selected for the first time, then a default password is stored in the ROM. The following message will appear on the screen;

Enter Password

Press <Enter>.

If the CMOS is working properly or the **USER PASSWORD** option is selected to change the default password, then the current password (the ROM password or the use-defined password) stored in the ROM needs to be entered first. The following message will appear on the screen;

Confirm Password

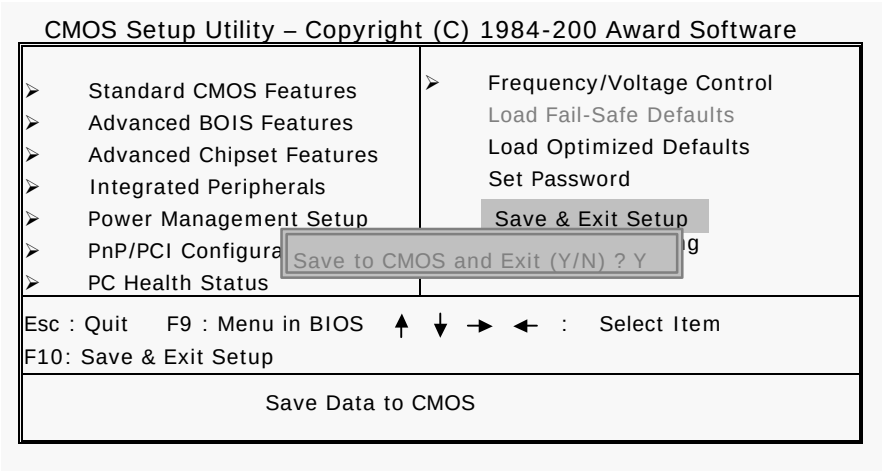
Enter the current password and press <Enter>.

After pressing <Enter>, then the new password (8 characters at most) can be entered now. The new password will be stored in the CMOS.

Please note that to enable this option, either **Setup** or **System** is to be selected from the **ADVANCED BIOS FEATRUES** first.

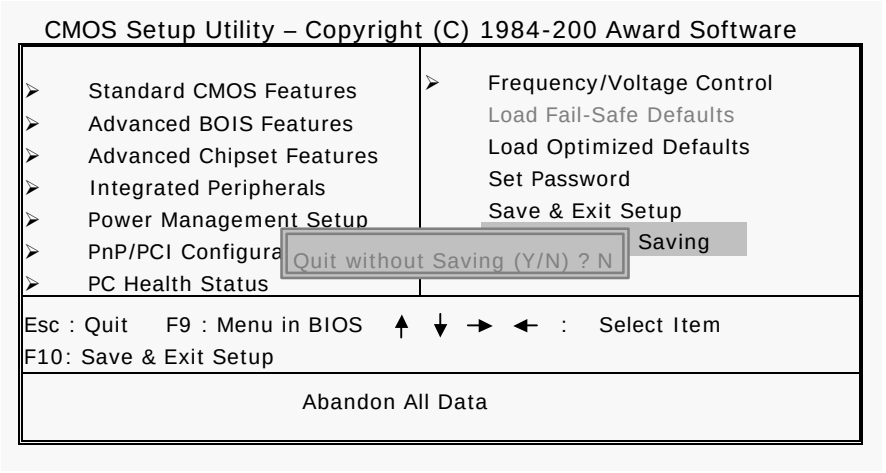
7.4.13. Save and Exit Setup

If the **SAVE & EXIT SETUP** option is selected, the values entered the setup utilities will be saved in the chipset's CMOS memory. When the system is turned on every time, the CPU will check the CMOS to compare the CMOS data to see whether it matches the system. These data are very important for the system operation.



7.4.14. Exit Without Saving

If the **EXIT WITHOUT SAVING** option is selected and <ENTER> is pressed, you will exit the Setup program without saving any new values. The CMOS will still keep the old values.



8. SOFTWARE & DRIVERS INSTALLATION

The chapter introduces the PC 610 onboard VGA, Ethernet, Audio and the respective drivers and installation.

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8.1. Ethernet Drivers

The PC 610 provides a 10/100 Base T fast Ethernet.

The PC 610 Ethernet drive diskette or CD diskette contains the following drivers;

SiS630ST Ethernet drivers for

- ✧ Windows 95/95OSR2
- ✧ Windows 98/98SE
- ✧ Windows 2000
- ✧ Windows ME
- ✧ Windows NT 4.0
- ✧ Windows XP

For the Ethernet drivers, please download the updated drivers from the following website

http://www.sis.com.tw

8.2. PC 610 AGP XGA

By integrating an advanced hardware 2D/3D GUI engine and 64-bit graphic display interface, the PC 610 can deliver AGP 4X performance and memory bandwidth of up to 1GB. It adopts *Share System Memory* architecture which can flexibly utilize the frame buffer size up to 64MB.

In addition to providing standard interface for analog monitor, the PC 610 also provides an interface for digital flat panels.

The PC 610 XGA driver diskettes contain the following drivers;

SiS630ST VGA drivers for

- ✧ Windows 9x
- ✧ Windows 2000/XP

For the VGA drivers, please download the updated drivers from the following website

http://www.sis.com.tw

8.3. Audio Setup

The PC 610 audio driver diskette contains the following drivers;

SiS630ST audio drivers for

- ✧ DOS
- ✧ Windows NT 4.0
- ✧ Windows 2000
- ✧ Windows 95/98
- ✧ Windows 98SE
- ✧ Windows ME
- ✧ Windows XP

For the audio drivers, please download the updated drivers from the following website

http://www.sis.com.tw

8.4. Touchscreen Drivers

The panel PC audio driver diskette contains the following drivers;

- ✧ 3M resistive touch drivers
- ✧ 3M capacitive touch drivers
- ✧ Elo resistive/SAW touch driver
- ✧ E-turbo touch drivers

8.5. Driver Installation

To install the Ethernet, VGA, Audio and Touchscreen drivers, find the drivers from the correct directory and execute the execution files. All the related drivers for the motherboard are stored in the floppy diskettes or the panel PC tool CD under the following route;

PanelPC & Motherboard/Drivers & Utilities/PC 6x0 & Panel PC (Socket 370, Celeron_P3)

The drivers for touchscreen are stored under the following route;

PanelPC & Motherboard/Drivers & Utilities/xxx Touch

Find the brand and touch type installed with the panel PC and find related drivers in respective directories.

Please refer to the readme.txt file under each directory for more drivers' information.

Recent releases of operating systems always include setup programs that load automatically and guide you through the installation.

Appendix

A: LCD Specification

A-1. ODYSSE 120 LCD

The standard display used for the ODYSSE 120 is a TORISAN 12.1" TFT active matrix color liquid display (LCD) module; its model no. is MXS121022010 or its equivalent. It composes of LCD panel, driver ICs, control circuit and backlight. By applying 6 bit digital data, 800x600, 260K-color images are displayed on the 12.1" diagonal screen. Input power voltage is single 3.3V for LCD driving.

A-1-2. SPECIFICATION

Inverter backlight is not included in this LCD module. General specifications are summarized in the following:

ITEM	SPECIFICATION
Display Area (mm)	246.0 (H) x 184.5 (V) (12.106 inch diagonal)
Number of Pixel	800 x R.G.B (W) x 600 (H)
Sub Pixel Pitch (mm)	0.1025 (W) x 0.3075 (H)
Pixel Pitch (mm)	0.3075 (W) x 0.3075 (H)
Number of Color	262144 colors
Active Viewing Angle	246.0 (W) x 184.5 (H)
Bezel opening area	250.0 (W) x 188.5 (H)
Brightness (cd/m^2)	150 (cd/m^2)
Module Size (mm)	275.0(W)*199(H)*6.9max (T)
Module Weight (g)	440 g (TYP.)
Backlight Unit	CCFL, 1-tube

A-2. THE LCDS FOR ODYSSE 150

The standard display used for the ODYSSE 150 is either LG 15.1" TFT LCD, LM151X2 or its equivalent or a Chi Mei 15" TFT LCD, M150X3-L01 or its equivalent.

A-2-1: 15.1" LG LM151X2

The LM151X2 is a TTL interface 15.1" TFT active matrix color liquid display. It comprises amorphous silicon TFT attached to each signal electrode, a driving circuit and a backlight. This LCD has a built-in backlight with inverter. The 38 cm (15.1") diagonal display area contains 1024 x 768 pixels and can display more than 262,144 colors simultaneously.

A-2-1-1 SPECIFICATION

General specifications are summarized in the following:

ITEM	SPECIFICATION
Display Mode	Normally white
Number of Color	262144 colors
Viewing Angle	* Horizontal: 60° (typ. Left side, right side) * Vertical: 45° (typ. Up side, Down side)
Cross talk	Horizontal: 2.5% Vertical: 2.5%
Response time	50ms(typ.)
Brightness (cd/m^2)	200 cd/m^2
Life time	40,000 hrs
Contrast Ratio	200:1

A-2-1-2. ABSOLUTE MAXIMUM RATINGS

ITEMS	SYMBOL	MIN.	MAX.	UNIT
Power Supply Voltage	V_{DD}	0	+3.6	V_{DC}
Lamp Current	I_{BL}	-	9.0	mArms
Operating Temperature	Top	0	50	°C
Storage Temperature	Tst	-20	60	°C

Note: Humidity (operation)20~90%, relative humidity

Humidity (non-operation) 5~85%

A-2-1: 15" Chi Mei M150X3-L01

The LM150X3_L01 is a 15.0" TFT Liquid Crystal Display module with 4 CCFL backlight units and 20 pins LVDD interface. This moulde supports 1024*768 XGA mode and can display 16.2M. The optimum viewing angle is at 6 o'clock direction.

A-2-2-1. SPECIFICATION

Inverter backlight is not included in this LCD module. General specifications are summarized in the following:

ITEM	SPECIFICATION
Display Area (mm)	304.1 (H) x 228.15 (V) (15.0" diagonal)
Bezel Opening Area (mm)	308.2 (H) x 232.1 (V)
Driver Element	a-Si TFT active matrix
Pixel Number(pixel)	1024 x R.G.B (W) x 768 (H)
Pixel Pitch (mm)	0.297 (W) x 0.297 (H)
Pixel Arrangement	RGB vertical stripe
Display Color	16,194,277 colors
Passive Mode	Normally White
Viewing Angle	* Horizontal: θ_x+ 60°, θ_x- 60° * Vertical: θ_Y+ 40°, θ_Y- 60°
Brightness (cd/m^2)	250 (cd/m^2)
Module Weight (g)	1,350 g (max.)
Backlight Unit	CCFL, 4-tube

A-2-2-2. MECHANICAL SPECIFICATION

Item		Min.	Typ.	Max.	Unit
Module Size	Horizontal (H)	-	331.6	-	mm
	Vertical (V)	-	254.76	-	mm
	Depth (D)	-	13.0	-	mm
Weight				(1,350)	G

A-2-2-3. ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Value		Unit
		Min.	Max.	
Power Supply Voltage	V_{CC}	V_{SS}0.3	4.0	V

A-3. THE LCD FOR ODYSSE 170 III

The standard display used for the ODYSSE 170 is a Chi Mei 17.0" TFT active matrix color liquid display (LCD); its model no. is ME170E1-01 or its equivalent. This product is a 17.0" TFT Liquid Crystal Display Module with 2 dual CCFLs Backlight unit and 30 pins LVDS interface. This module supports 1280 x 1024 SXGA mode and can display 16 million colors.

A-3-1 SPECIFICATION

General specifications are summarized in the following:

ITEM	SPECIFICATION
Display Mode	Normally white
Number of Color	16M colors
Viewing Angle	* Horizontal: 60° (typ. Left side, right side) * Vertical: (typ. Up side 40°, Down side 60°)
Cross talk	Horizontal: 5% Vertical: 5%
Response time	15 ms(typ.)
Brightness (cd/m^2)	230 cd/m^2
Life time	50,000 hrs
Contrast Ratio	300:1

A-3-2. ABSOLUTE MAXIMUM RATINGS

ITEMS	SYMBOL	MIN.	MAX.	UNIT
Power Supply Voltage	V_{DD}	4.5	+5.5	V_{DC}
Lamp Current	I_{BL}	6.0	14.0	mArms
Operating Temperature	Top	0	50	°C
Storage Temperature	Tst	-20	60	°C

Note: Humidity (operation) 20~90%, relative humidity
Humidity (non-operation) 5~85%

B: DiskOnChip â Installation

The ODYSSE 120/150/170 III is equipped with an internal flash disk which can emulate a floppy disk drive by adapting DiskOnChip® memory chips from 2MB to 144MB capacity, and the flash disk is fully compatible with floppy disk format of MS-DOS system.

To install a DiskOnChip® memory to the provided socket, follow the instructions below;

1. Make sure the computer is turned off
2. Insert the DiskOnChip® memory device into the onboard socket. Make sure that pin 1 of the DiskOnChip® is aligned with the pin 1 of the socket.
3. Power up the computer
4. During the power up, the DiskOnChip® drivers will be automatically loaded into the system memory.
5. At this time, the DiskOnChip® can be accessed as any disk drive.
6. If it is the only disk in the system, it will appear as the first drive, drive C:.
7. If there are more drives already attached to the system, then by default, the DiskOnChip® will appear as the last drive unless specially programmed.
8. If the DiskOnChip® is to be bootable, then follow the steps below
   a. Use DOS command to copy the operating files into the DiskOnChip®
   b. The DiskOnChip® is to be configured as the first drive, drive C: in the system. Use the DUPDATE utility.

      DUPDATE D /S: DOC104.EXB /FIRST (set as c:)

      DUPDATE C /S: DOC104.EXB (set as d:)

For more information and for the latest software utility and utilities manual on the DiskOnChip®, visit M-System website at www.m-sys.com .

C: System I/O Ports

Address range (Hex)	**Device**
000-01F	DMA controller
020-021	Interrupt controller 1, master
022-023	Chipset address
040-05F	8254 timer
060-06F	8024 keyboard controller
070-07F	Real time clock, non-maskable interrupt mask (NMI)
080-09F	DMA page register
0A0-0BF	Interrupt controller 2
0C0-0DF	DMA controller
0F0	Clear math co-processor
0F1	Reset math co-processor
0F8-0FF	Math co-processor
1F0-1F8	Fixed disk
200-207	Game Port (not used)
443	Watchdog timer
143	Watchdog timer
208	DIO port
2E8	Serial port #4
2F8-2FF	Serial port #2
300-31F	Prototype card (not used)
330-331	MPU-401 Compatible
360-36F	Reserved
378-37F	Parallel printer port 1 (LPT1)
380-38F	SDLC, bisynchronous 2 (not used)
3A0-3AF	Bisynchronous 1 (not used)
3B0-3BF	Monochrome display and printer adapter (LPT1) (not used)
3C0-3CF	Reserved
3D0-3DF	Color/graphics monitor adapter
3E8	Serial port #3
3F0-3F7	Diskette controller
3F8-3FF	Serial port #1

C: Wake-On-LAN

The Wake-On-LAN is a remote management tool with the advantage to reduce system management workload. It provides the capability to remotely power on the client computers supporting Wake-On-LAN by simply sending a "wake up packet". After powering up the client systems, the user is able to monitor the remote systems' status and to upload or download files to or from the clients. With this feature, MIS persons can flexibly perform client maintenance during off-hours; the Total Cost of Ownership (TCO) will be thus lowered.
To use Wake On LAN function, the client system must have a network card with chipset that supports the Wake-On-LAN and an ATX power supply meeting 2.01 with at least 720mA standby current is also required to support the Ethernet card for this function. The ODYSSE is a panel PC system with these two features. To use the ODYSSE Wake-On-LAN function, please refer to the following;

1. **Download the "Wake up packet**",
PCnet Family Software Magic Packet Utility. This utility is downloadable from AMD website at

http://www.amd.com/us-en/Networking/ProductInformation/0,,50_2330,00.html

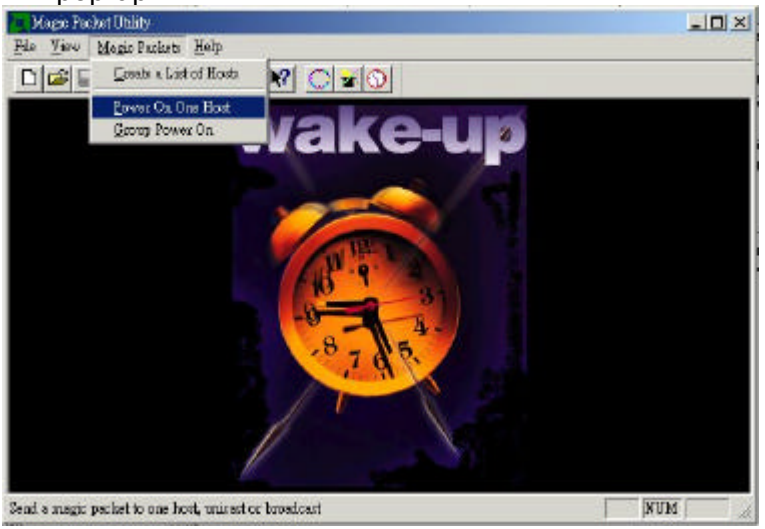
Or refer to the **Magic Packet™ Technology** at AMD website for how to write your own wake-up program.

http://www.amd.com/us-en/Networking/TechnicalResources/0,,50_2334_2481,00.html

2. **BIOS Setting**
   Enter the *POWER MANAGEMENT SETUP**PM WAKE UP EVENTS* to enable the *MACPME POWER UP CONTROL*

3. Wake up Packet

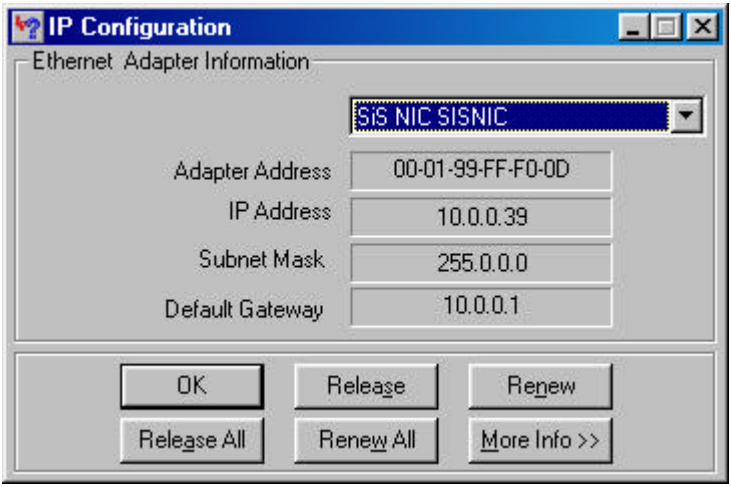
To use the AMD's Magic Packet, program installation is not needed. Just open the MAGPAC.EXE, then the following screen will pop up.


Magic Packet Utility
File View Magic Packets Help
Create a List of Hosts
Power On One Host
Group Power On
Wake-up
Send a magic packet to one host, unicast or broadcast
NUM

The remote computer can be waken up by selecting the *MAGIC PACKETS¢ @OWER ON ONE HOST* as shown below.

Do not change the *IP BROADCAST ADDRESS*. The *DESTINATION ETHERNET ADDRESS* is to be filled in with the Ethernet card's MAC address.

To obtain the Ethernet card MAC, under Windows 9x, just enter *START\RUN* to open the *winipcfg.exe*, then the following screen will pop up. If the OS is Windows NT 4.0 or 2000 or XP, then you need to enter DOS mode to run *ipconfig.exe* to obtain the MAC.



The adapter address is the LAN card's MAC address.

4. After obtaining all the above information, the remote computer can be powered on now.

Now you can use *Desktop On Call* or other remote software to control the remote computer.

D: First MB Memory Map

Address range (Hex)	Device
F000h-FFFFh	System ROM
CC00h-EFFFh	Unused
C000h-CBFFh	Expansion ROM
B800h-BFFFh	CGA/EGA/VGA text
B000h-B7FFh	Unused
A000h-AFFFh	EGA/VGA graphics
0000h-9FFFh	Base memory
D000-D7FFH	DiskOnChip®(Default)

E: Power Supply

The ODYSSE 120/150/170 III can either accommodate an AC power supply or a DC power supply.

E-1: AC POWER SUPPLY

The AC power supply used in the ODYSSE 120/150/170 III system is a 150 watts 1U ATX power supply. It is a dual output switching power supply specially designed for the ODYSSE III system.

E-1-1: ELECTRONIC SPECIFICATIONS

INPUT

Input range	100-127/200-240VAC, switch selectable
Frequency	47~64Hz
Input current	5A@ 115VAC, 2.5A@230VAC
Inrush current	35@115VAC, 70A230VAC cold start at 25°C

OUTPUT

Maximum power	150W
Hold-up time	14ms at full load @115VAC
Short circuit protection	All output
Overvoltage protection	+3.3V > 130% +5V > 160%, +12V > 140%

E-1-2: ENVIRONMENT

Operation	0°C to 50°C
Shipping & storage	-20°C to 60°C
MTBF	100,000 hours at 75% of maximum continuous output loading at 25°C ambient conditions

E-1-3: INTERNATIONAL STANDARD

✧ **Safety standards**

Designed to meet the following standards
UR
TUV
FCC B
CE

E-1-4: MECHANICAL SPECIFICATION

Output rating	+3.3V		+5V			+12V			-5V		-12V		+5VSB	
	min.	max.	min.	max	peak	min.	max	peak	min	max	min	max	min	max
Ripple & noise	100mV		100mV			150mV			200mV		200mV		100mV	
Regulation	5%		5%			5%			10%		10%		5%	
Output rating	0.5A	7A	1A	12A	14A	0.5A	5A	8A	0A	0.2A	0A	1A	0A	2A
	83W MAX.													

✧ **Dimension (unit: mm)**

180 x 100 x 40.5 (L x W x H)